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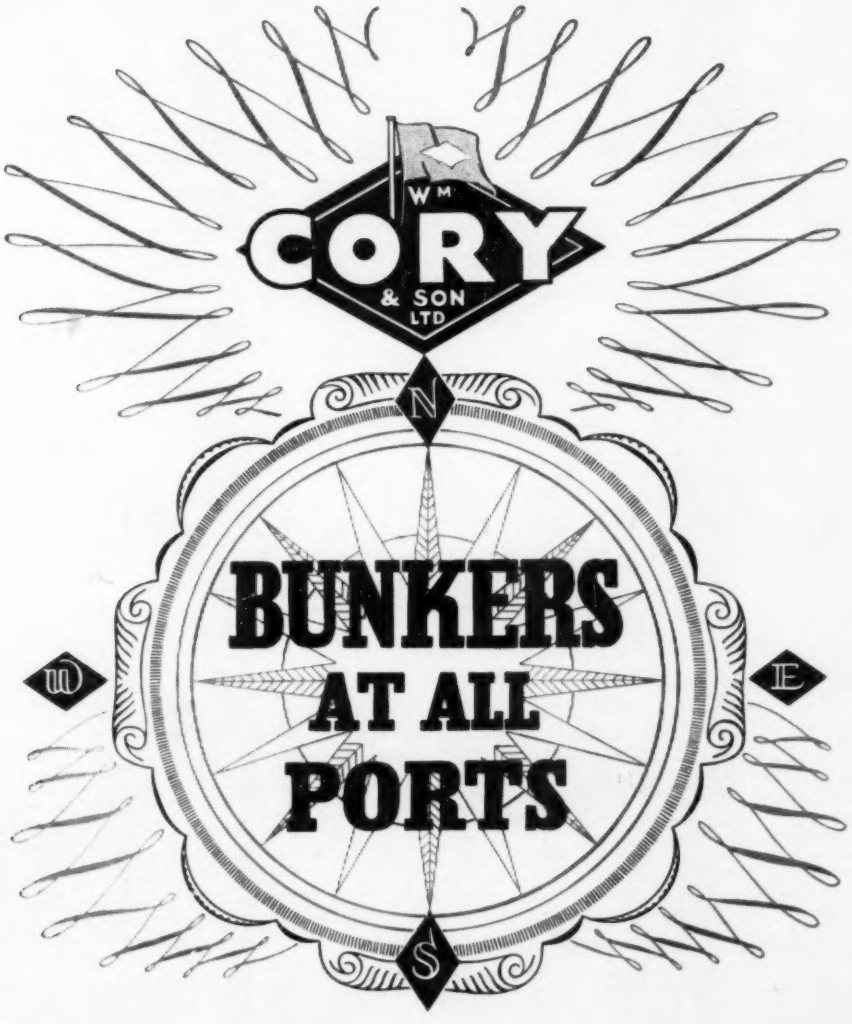

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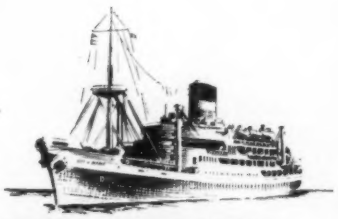

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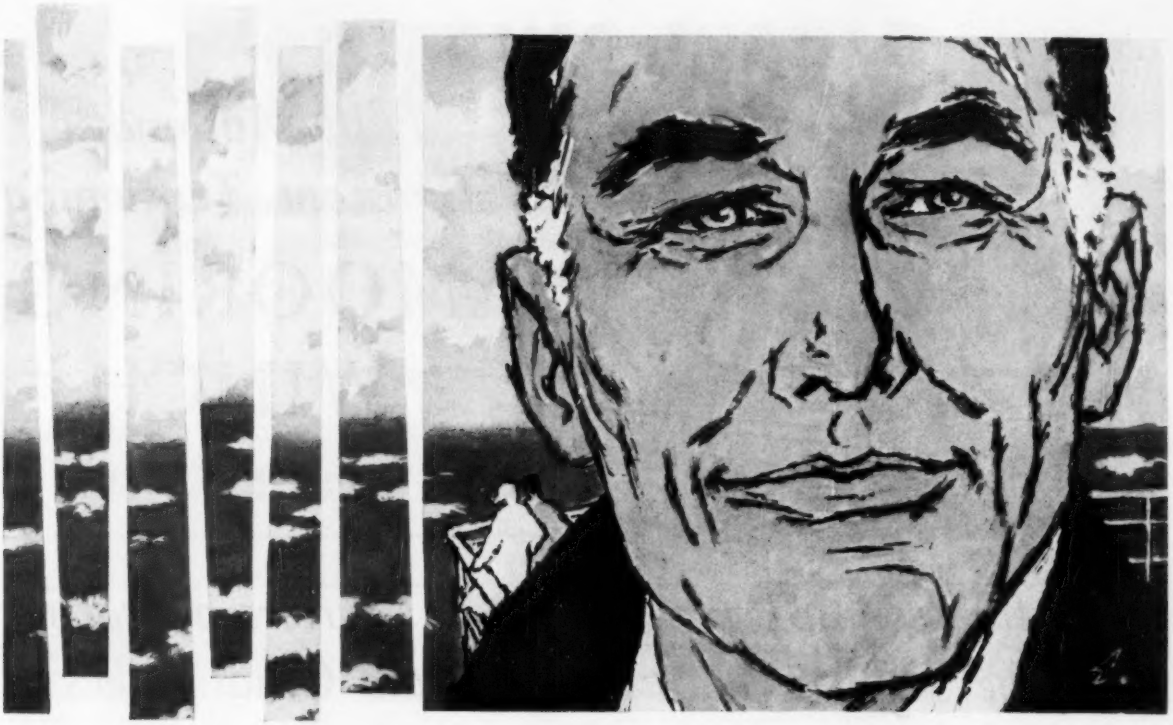

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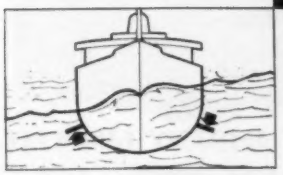

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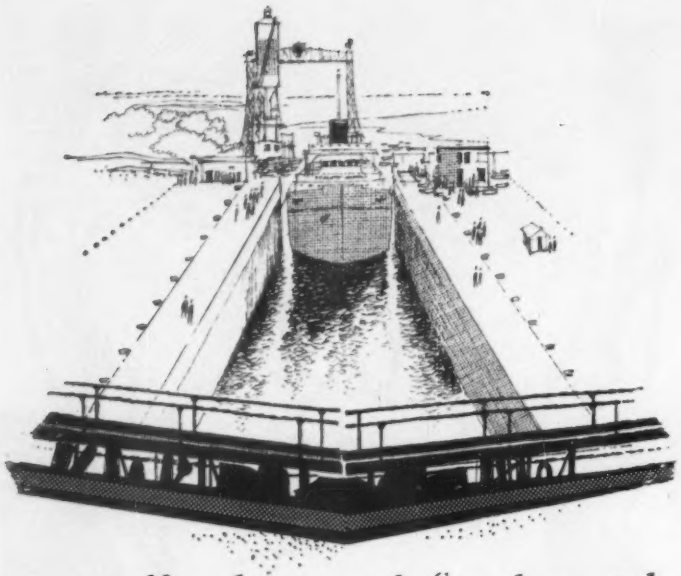

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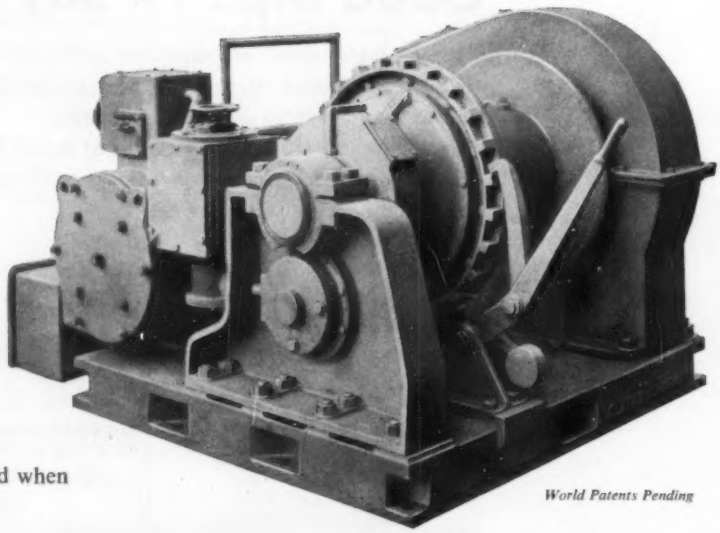

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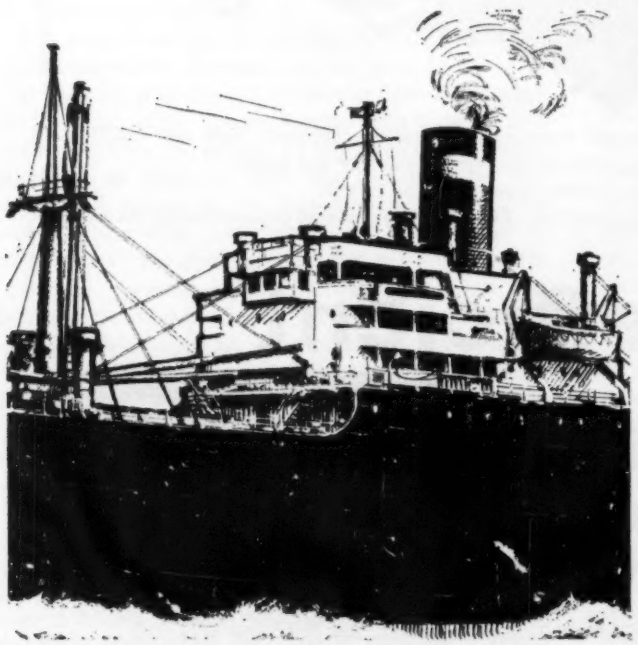

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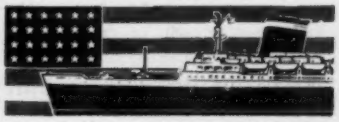

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THE SHIPPING WORLD

LOYALTY WITH LIMITS

For the second time in about six months shipping in the Port of London has been disrupted by a major stoppage, and an unofficial one at that. This time the excuse for bringing the men out was that the work of unloading about 100 tons of cargo every three or four weeks at a small private wharf was not being given to registered dock workers, despite the fact that the National Dock Labour Board had officially approved of the arrangement. The unofficial "leaders", mainly self-confessed Communists, had little difficulty in representing this arrangement as an attempt to deprive the dockers of their livelihood, although only six men were involved, and in no time at all thousands of dock workers were out on strike, despite the pleas of their trade union officials for them to return to work. When they did return to work, hundreds of them were surprised, and no doubt aggrieved, by the fact that there were no ships for them to work on. Yet there can be no doubt that many other ports, particularly on the Continent, are doing good business at the expense of the London dock strikers.

The basic cause of the trouble in the docks is the mental attitude of the dock workers, doubtless a hangover from the grim days of the prewar depression, when there was no Dock Labour Scheme with a guaranteed "fallback" wage (at present £7 per week), no Welfare State and no pensions. What has persisted—and this is probably helped by the high average age of dock workers—is a deep and proud sense of "loyalty" to their "mates" and their families. But there this loyalty ends, and becomes nothing but pure selfishness and disregard for others. There is no loyalty to their trade union, to their employers or to the community to which they belong. There was a striking article last week in the *Financial Times* by "Observer", who described the "dispiriting" experience of talking to some of the strikers. They dismissed Mr Frank Cousins, for instance, who is the general secretary of the Transport & General Workers' Union to which most of them belong, as "being too interested in the Bomb"—and this is a criticism which certainly has some justification, since far too many trade union leaders seem to be more preoccupied with political than industrial affairs. They believe that the port employers, collectively and individually, are out to work everybody as hard as possible for as little as possible. They believe that the Press is "crooked", never giving the facts and slanting every story to suit its own ends, whatever they might be. As "Observer" continued: "Their unofficial leaders are the only people in whom they place any trust, and they angrily dispute statements that Communist agitators are leading them by the nose. But when they are asked why they do not vote these people into official positions, they reply that the union won't allow it because 'the leaders are Reds'. In any case they claim that when an unofficial agitator becomes a union official, he 'changes'".

It is this atmosphere of suspicion, bitterness and enmity which pervades the docks, passed down from one generation to another; and it is this attitude that the port employers and the trade unions must try and find a way to change. Government and trade union exhortation makes little impression, and the dockers at present could not care less how many millions of pounds of export trade is lost to the national economy through their actions. It is a problem of immense difficulty, but the docks will never be free from trouble until this misplaced sense of limited loyalty and its antithesis of selfishness can be replaced, if not by a spirit of service to the community, at least by more enlightened self-interest.

Current Events

Insufficient Support

Mr D. S. Tennant, general secretary of the Merchant Navy & Airline Officers' Association, had some pungent remarks to make about the plight of coastwise shipping at the 25th general meeting. British shipping, he said, was not receiving either the support or the understanding it should from the Government. Britain's share of world tonnage was declining, when world trade was expanding, and the coastwise shipping position was precarious. "The White Paper on the future financial arrangements to be made to enable railway modernisation and greater facilities for the railways to capture traffics, coupled with the ever-increasing competition—much of it cut-throat—from road transport is crippling, if it hasn't already crippled, coastwise shipping. It is not a new problem. It has been developing since 1953 and your Association has endeavoured to hammer home the effect of the short-sighted attitude of successive British Governments to the ever-increasing problems of coastwise shipping". Mr Tennant had advocated that there should be a Minister whose

responsibility should be that of shipping and civil aviation. "The functions of the Minister of Transport were subsequently divided, but in my view in the wrong way. It is farcical that the present Minister, responsible for roads, railways and coastwise shipping, is bolstering two sections and steadily sinking the other. This is a Jekyll and Hyde act if ever there was one. Unless the Government takes a tumble pretty quickly the days of coastwise shipping will be numbered". The appointment of Vice-Admiral Hallett as a Parliamentary Secretary with special responsibilities for shipping was "just pandering to the pressures which have been exercised on the Government in Parliament and elsewhere. A Junior Minister has to carry out the policy of his Minister and as the Minister has no policy for shipping—apart from coastwise, which he apparently intends to put out of business—where is this change going to get us?"

The Tanker Surplus

IN THE annual report of the MNAOA mention was made of the current surplus of tanker tonnage, and the view held by some people that the position will now continue to improve until the supply of tankers comes into balance with the demand for them about 1962 or 1963. "These optimistic forecasts are generally based on assumptions that ships will be scrapped when they are about 20 years old, and that there will be no rush of newbuilding. The danger is that if owners accept the view that ships and cargoes will be in balance by 1962, and that there will be a shortage of tankers in the following years (a shortage of 7,321,000 dwt of economical tankers in 1965, according to one forecast), they may be tempted to step up orders again, thus preventing this forecasted balance or shortage from ever happening. Moderation and avoidance of over optimism seem to be called for".

Shipbuilding and Rating

DESPITE the urgent representations made by British shipbuilders to the Government for some special provision for their industry in the Rating and Valuation Bill, the proposed amendment has been rejected. The industry must now face the fact that the existing 50 per cent industrial derating will be abolished, thus adding still further to the rating burden on the shipyards and their associated establishments. In Scotland, even making the most optimistic allowance for a fall in the poundage rate and even in advance of the loss of de-rating which would double existing assessments, tens of thousands of pounds have been added to the rates burden of individual establishments and, in consequence, many thousands of pounds to the cost of every ship built in any year. The Shipbuilding Conference has pointed out that, ironically, the burden falls heaviest on the yards which have spent most in recent years on modernisation. One firm on Clydeside which has spent millions on modernisation is now faced with an increase in rates payable from £9,000 at the present to £100,000 in 1963. The additional cost per ship when order books were thin and output perhaps only two or three ships per annum, is obvious and crippling. The Shipbuilding Conference declared: "It is certainly the antithesis of incentive so to penalise firms in this way who have accepted the challenge of the severest competition known for 30 years, and who in official and unofficial quarters have been roundly criticised for not having spent enough of their resources to date on modernisation. It is contradictory for the Government to emphasise the urgency of developing exports—which in shipbuilding means severe competition in price and credit terms, and, in some cases, the influence of subsidies—when at the same time hugely increased financial burdens are placed upon shipbuilders through rating." The Government has repeatedly expressed its desire to find ways and means of helping the industry, and this was one way in which it could have effectively done so.

The floodlighting of the funnel of the new Canadian Pacific liner "Empress of Canada" is done in a novel manner. The yellow funnel is lit by eight sodium lamps, giving a yellow light, and the red and white colours of the emblem are picked out by six tungsten reflector lamps. The lamps were supplied by Philips, and the firm carried out the necessary research on the project

U.K. Ore Ports Inadequate

BY 1965 nearly half the United Kingdom's ore imports are expected to come from overseas ports which can load ships of over 28,000 tons. But only 15 per cent will be received at U.K. ports able to handle ships of this size. That is the picture revealed in a section of the special report on Development in the Iron and Steel Industry issued by the Iron & Steel Board (HMSO, 7s.). The report is the third of a series (the last was issued in 1957) and is a veritable mine of information on all aspects of the industry. The question of the adequacy of handling facilities at British ore discharging ports is one of the problems examined, and the main conclusion is that "much remains to be done". British ore imports are now running at the rate of about 18 mn tons per annum. By 1965 the requirements are expected to increase to between 24 and 27 mn tons, and most of the increased imports are expected to come from Sweden, Canada and West Africa. In recent years the emphasis has been on longer hauls and on balance this trend will continue. During the postwar years the proportion of imports from sources over 2,000 miles away has gone up from 21 to 40 per cent. It is, of course, on the long-haul routes that the larger ore carrier shows the biggest economies, and at present British port limitations are preventing this country from reaping advantages which are not denied to Continental competitors. It is suggested that Newport and Middlesbrough should be expanded to take 30,000-tons ships. This is one problem to which the Rochdale committee on ports will no doubt direct its attention, but it may be hoped that the port authorities concerned will not wait to be prodded from that quarter. Another urgent matter, to which the report does not refer, is the need for streamlining discharge procedures.

Faster Service to Far East

THE NEW schedules for their services to the Far East which have been announced by the Ben Line represent a considerable improvement in speed. The new times of 20 days for London to Singapore and 28 days for London to Hong Kong are the fastest offered by any company, while the return time of Hong Kong to London in 30 days is seven days faster than the company's present schedule. To achieve these fast services the company needs fast ships. The new express service that gives the outward times quoted, loading at Middlesbrough, Hamburg and London for Singapore and Hong Kong only, will be maintained by three Ben Line ships. One of these will be the *Benloyal*, described in THE SHIPPING WORLD of 18 February 1959, which is the first of a new class for the Ben Line. The second ship of the class, the *Bengloe*, is just completing at present, and the third ship for the new service will be the older *Bendoran*. Another ship of the new class, differing only in having diesel propulsion instead of steam turbines, is under construction by Charles Connell & Co Ltd, who built the first two, and an order for another ship, identical to the third and built by the same firm, was announced simultaneously with the new services. These ships are stated to have a service speed of 19 knots, but it is understood that they have something in hand at this speed. It may well be that when sufficient ships of the new class are in service the Ben Line will be able to announce a further improvement in their schedules.

Cubic Cargoes

THESE fast ships, with their very fast lines, are well suited to the Far East trade with its high proportion of manufactured goods moving in both directions. Cargoes are essentially cubic rather than deadweight, and the new Ben Line ships are unusual in having a gross tonnage larger than their dealweight—a clear indication of fine lines below the waterline. The diesel engines powering the second two ships are to be Sulzer engines built by Barclay Curle and developing 13,500 bhp. The company has swung to diesel propulsion for its new ships partly because of the availability of high powers from diesel machinery, with its far lower fuel consumption, but also because in the past two years the initial price of diesel machinery has become less than that of its steam turbine equivalent. This, it may be remarked, is a further reason for aiming at simplicity in steam turbine designs. The *Bengloe* and the two later ships will have air conditioning throughout the passenger and crew accommodation.

Shipping Routes Declared Safe

TWELVE minesweepers of the 104th and 120th Minesweeping Squadrons, Far East Fleet, were working day and night for the last two weeks of April searching for second world war mines off North Borneo. They have widened safe channels in Balabak Strait between Borneo and the Philippines and cleared the previously dangerous area in Paitan Bay for use by ships engaging in the expanding timber trade. The minesweepers are normally based on Singapore and Hong Kong. With Royal Navy frogmen they have been operating 1,000 miles from their bases supplied, maintained and repaired by their support ship HMS *Woodbridge Haven*, and the Royal Fleet Auxiliary *Gold Ranger*. For the last three days they were joined by four U.S. ocean minesweepers of the Seventh Fleet. All ships had to sweep close to dangerous coral reefs and at times in tropical storms. A signal received at Admiralty on May 1 saying "Operation completed" means that new areas of water between Borneo and Philippines are now safe for commercial shipping for the first time for over 20 years.

Fishery Research Vessels

How do creatures seven miles miles down in the ocean's depths generate light within their bodies? Why do fish migrate; do they navigate celestially as birds do? Adult sea fish are caught, but their eggs are never found. Where are they laid? Questions like these are beginning to be answered by research vessels exploring the sea. Some 200 Japanese research vessels, for example, range thousands of miles testing currents, temperatures, the concentration of plankton—gathering indicators of where the fish are. The fishery research vessel, which not only collects hydrographic information, but tests new fishing methods and gear, will be the major subject at a Food & Agriculture Organisation (FAO) sponsored forum on research vessels, from September 18 to 30, in Tokyo. The purpose of the meeting is to compile and exchange information on the design and operation of research vessels, particularly those for fishery research, according to Mr Jan-Olof Traung, Chief of FAO's Fishing Boat Section, who will serve as secretary of the meeting. It will also give oceanographers, biologists and naval architects a chance to discuss mutual problems and accomplishments. Fisheries research vessels, no matter who designs them, all have one thing in common. They are expensive, for they must also be floating laboratories. A small research vessel of about 500 tons will cost around $1.65 mn, and the United States is planning to build 70 research vessels costing $210 mn during the next ten years. Fishery research vessels have already paid off in immediate results. A German vessel, the *Anton Dohrn*, has found several new fishing grounds. One bank located near Greenland and yielding red fish, has been named the Dohrn Bank. A Norwegian fisheries research vessel spotted the herring before they reached the Norwegian fjords. This enabled the herring season to be extended and the increased revenue from the larger catch paid for the boat. The FAO's Fishing Boat Section has advised a number of its member governments, including the United States and Iceland, on the design of fishery research vessels. The Section designed three such vessels for South Africa. Another of its jobs was saving the Swedish Government about $160,000 on refitting its fishery research vessel *Skagerak*. The Section recommended engines and winches that cut the refitting cost; the resulting saving more than equalled the Swedish contribution to FAO that year. The Research Vessel Forum will also examine hydrographic survey ships, Polar exploration vessels, hospital ships, lighthouse tenders, cable ships and non-magnetic ships.

The Age of the Computer

"WITH the coming computer age, all is not peaches and cream because it becomes too easy to study the effect on performance by varying each of the input data, one at a time, two at a time or N at a time in order to to optimise results. In the hands of overzealous people the cost of optimising or making small insignificant changes can outweigh the gains to be made. Thus, the computer has not yet reached the stage where it can replace good judgment. While the computer can and does reduce the amount of labour heretofore required for individual calculation and in addition do it with more precision, the use of a computer often results in more work since there is a tendency to develop many calculations in order to produce the best engineering design. Although the computer calculates with a high order of precision it will not and does not "think", for it only does the operations that it is ordered to do. Consequently, it will produce results that are no more accurate than the judgment and thinking exercised in arriving at the programme used". From a paper on the use of computers for heat-balance calculations, read in the United States.

ON THE "BALTIC"

GOOD DISCHARGE RATES IN JAPAN

By BALTRADER

With so much tonnage fixed to Japan in recent months it will be a remarkable achievement if there is no congestion in her ports this summer, but over the year Japan has had a good record in this respect. The conventional rate of discharge in bulk cargo charters to Japan is 1,000 tons per day, but charterers normally expect to do very much better and accordingly earn plenty of dispatch money. This means, of course, that the charterers concerned have a reserve of several days up their sleeve, and even if congestion should develop the immediate effect will be that charterers' dispatch money receipts will be reduced rather than that demurrage will be incurred. Of course, while a charterparty discharging allowance of 1,000 tons per day may be reasonable for a 10,000-tonner, it needs a very much higher daily rate of discharge to sound attractive to the owner of, say, a 20,000-tons bulk carrier, a size of vessel which is no longer a rarity on the freight markets today. To cater for such vessels Japanese charterers and/or receivers are prepared to agree very much higher rates of discharge, and iron ore from Chile to Japan for example can be fixed with 10,000 tons per day load and 10,000 tons per day discharge, an indication that the actual loading and discharging operation will be far from a leisurely affair.

At the present moment ore from South Africa to Japan is quoted for vessels of up to 20,000 tons capacity with 8,000 tons per day discharge and such rapid rates are certain to become more and more common as the size of bulk cargo carriers continues to increase. Recently 20,000-tons vessels have been fixing with coal from Hampton Roads to Japan with six days all purposes and Sundays and holidays included, a very great improvement on the more usual 1,500 tons per day load/1,000 tons per day discharge, Sundays and holidays excepted. Of course, Japan is not the only place in the world capable of quick dispatch, and in the cases cited above both Hampton Roads and Chile show they are capable of remarkably rapid rates of loading. A transformation has taken place in the past few years in the shipment of sugar from Australia, for instead of taking three weeks to load a 10,000-tonner with a bagged cargo in Queensland with a charterparty rate of 750 tons per day, the introduction of several bulk loading installations allows ships to be loaded in less than 24 hours, while the charterparty rate has been increased to 5,000 tons per day.

North Pacific and Australia

In spite of the fact that a tremendous volume of tonnage is committed to discharge cargoes in the Far East over the next few months the adjacent North Pacific and Australian markets have lately remained remarkably steady. Several early cargoes of grain from Australia to Japan, for example, have paid high rates and trans-Pacific grain rates to the same destination have also tended to rise, but in neither case does this apply for discharge in the U.K./Continent. Nevertheless the firmness of these Eastern markets has been due not so much to the active demand for tonnage in the area, but rather to the strength of the outward markets, which have made it well worth while for a ship to ballast from Japan or China to the U.S. Gulf, U.S. North of Hatteras or Cuba to pick up return cargoes to the Far East.

The feature of the Eastern markets last week was the much publicised news of Canadian grain sales to China which, according to unconfirmed reports, were likely to involve the shipment of as much as 5,000,000 tons of wheat and 1,000,000 tons of barley over 2½ years. By any standards this is big business which is bound to provide much useful employment for shipping, but the pleasure of dry-cargo shipowners on hearing this news last week was tempered by the knowledge that grain-carrying tankers were already being fixed for consecutive voyages with wheat from British Columbia to China.

The Freight Markets

There was not a lot of chartering on the freight markets last week, but this was mainly due to the fact that owners in many trades were holding for higher rates. There was no improvement in the trans-Atlantic trades, however, although fixtures included the tanker *Tank Emperor* with 23,000 tons of heavy grain from the St Lawrence to Poland at $3.65 f.i.o., May 10/25, and another tanker the *Dagali* with a similar cargo from the Great Lakes to Antwerp at $7.70 f.i.o., St Lawrence completion at $3, May 20/30. Other fixtures included the *Sunbreeze* with heavy grain from the St Lawrence to Marseilles at $5.75 free discharge for May loading, and the *Atreo* with a similar cargo from the U.S. Gulf to Naples at $7.50 free discharge, June 15/30. The *Uskok* takes wheat from the U.S. Gulf to picked ports U.K. at 56s 3d, June 8/20.

Full rates continued to be paid for scrap from North America to Japan and fixtures included *Periolos*, 9,500 dwt for cargo, 475,000 cu ft bale, from the U.S. Atlantic at $140,000 f.i.o., June 13/July 3, and the *Caprera*, a vessel with a similar capacity, was fixed with scrap from the Great Lakes, completing St Lawrence, to Japan at $171,500 f.i.o., loading as far ahead as August 25/September 30. In the Hampton Roads coal trades a May vessel was fixed to Chiba at $11 with the usual 1,000 tons per day free discharge, and the *Inverfield* was fixed from Hampton Roads to Rio de Janeiro, two consecutive voyages at $6.25, commencing August 1/31. From Cuba it was known that charterers had paid the substantially higher rate of 120s f.i.o. and free taxes for bagged sugar to China, June loading.

In the early part of the week the *Sirio* was fixed with heavy grain from Up River Plate, completing Buenos Aires, to Japan at the high rate of 112s 6d free discharge, clause 6 limited to 2,500 tons bagged cargo excluding sunflowerseed expellers, June 5/July 5. Sugar fixtures were reported from Mauritius to Montreal including *Port Wimbledon* at 67s 6d, July 20/August 15. The *Betty* takes 16,000 tons of iron ore from Durban to Japan at 53s f.i.o., August 1/31, and it is interesting to note that the charter party rate of discharge will be 8,000 tons per day.

The Australian market was rather quiet, but fixtures included a vessel with coal from Newcastle, N.S.W., to Japan at 47s 6d f.i.o., May 25/June 10. A Livanos vessel was fixed with bulk wheat ex silo from West Australia to Japan at the high rate of 60s free discharge, May 15/June 5. On the North Pacific, the *Leros* was fixed with wheat to Tokyo/Hakata Range at $6.85 free discharge. May 29/June 15.

On timecharter a vessel described as 14,060 dwt, 685,000 cu ft bale, 14 knots on 19 tons intermediate fuel oil, was fixed at 31s per ton, delivery Sydney, N.S.W., for the trip up to Japan, May 20/June 3, and the motorship *Riverdore*, 11,110 dwt, 542,000 cu ft bale, 14 knots on 16 tons intermediate fuel oil, was fixed with delivery passing Buenos Aires for the trip to Japan at 35s per ton, June.

NEWS FROM OVERSEAS

From THE SHIPPING WORLD'S Own Correspondents

Japanese Shipbuilding Strikes

A WAVE of short-term strikes at some Japanese shipyards and ports has delayed launches and deliveries and sailings. The strikes are the result of disputes over demands for wage increases by workers, which are usually made each year during the spring season. They included a scheduled 64-hours walkout by 65,000 workers at 18 shipyards. Managements were reported to be offering monthly pay increases from Yen 1,700 to Yen 1,800 against the average of Yen 4,000 demanded by the workers. The Ministry of Transportation estimated that Japan's 24 major shipyards had 107,533 employees on December 31. This represented a reduction of 1,809 from 30 June 1960, and of 17,317 from the peak figure of 124,850 at the end of 1957.

The launch of the 39,000-dwt tanker *Philippine Sea* by the Kawasaki Dockyard Co, Kobe, was one of those affected. The launch was said to have been postponed until early in May. But a "mock launching ceremony" was held at the yard on April 16, attended by 25 people including the Philippine Ambassador to Japan and the president of the Kawasaki Dockyard Co, Hoshio Tezuka. The vessel was stated to be the fourth and last of a series of 39,000-dwt tankers ordered from the yard by the Gulf Oil Co. It will have a speed of 17.25 knots, and is due to be delivered on July 25.

Norwegian Orders

NORWEGIAN interest in ordering new vessels has continued through the first quarter of 1961, and according to the Norwegian Ministry of Commerce this interest is substantial. As much as 635,000 dwt were licensed to be built outside Norway for Norwegian owners during this quarter. Twenty-six dry-cargo vessels and nine tankers were thus licensed. However during the same period an order for a dry-cargo vessel has been cancelled, so that the net result is 25 dry-cargo ships aggregating 210,700 dwt, while the nine tankers total 424,600 dwt. During the same period the Ministry has licensed the export of 22 dry-cargo vessels and eight tankers, the 30 vessels aggregating 166,400 dwt.

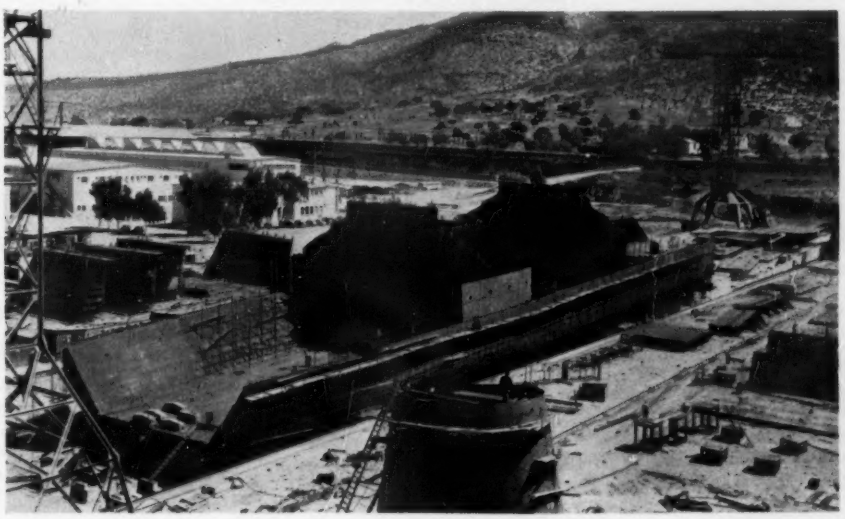
Among noteworthy orders announced recently is one for a bulk carrier of 18,000 dwt at one of the Verolme yards, Holland. The vessel is to be delivered in December 1962, and the order was placed by Einar Rasmussen, Kristiansand. She is scheduled to have a speed of 16 knots, and has already been fixed on a 12-years time-charter to Saguenay Shipping, Montreal. Mjellem & Karlsen, Bergen, recently obtained an order from the Norwegian Government to build a patrol vessel of 202ft to be fitted with four B.M.W. diesels which will develop 3,500 bhp together, and will give the vessel a speed of 17 knots. The vessel is to be ready for the autumn fisheries in 1962.

More details can now be given about the Norwegian orders at Spanish yards. In all, nine shelterdeckers of less than 500 grt, but of 1,900 dwt as closed shelterdeckers have been placed. The first two will be built by Euskalduna at Bilbao and the other seven by Constructora Gijanesa, Gijon, a daughter company of Euskalduna. Two are for Skibs A/S Karlander, Fredrikstad. They will be fitted with refrigerating space and used in liner traffic in the Far East. Two are for Victor L. Schage, Oslo. One is for Det Sondenfjelds-Norske Dampskibsselskab, Oslo. One is for A/S Borg E. H. Kongshavn, Haugesund, and three are for a group of owners in Oslo.

In addition to the above there were also placed orders for one or two single-deckers of 5,000 dwt by Valdemar Skogland A/S, Haugesund, and in addition three more such vessels have been ordered. Some details have still to be settled before the names of the owners can be given.

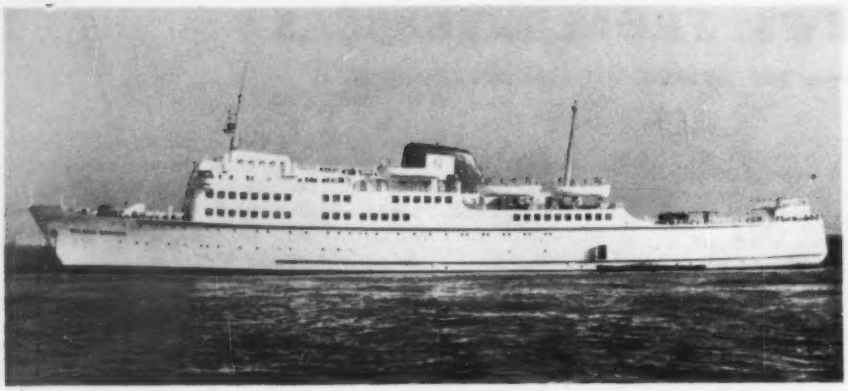
August Kjerland & Co A/S, Bergen, have ordered two single-deckers of 4,000 dwt and in addition J. M. Johannesens Rederi A/S as well as Harald Meidell, both of Bergen, have ordered one 4,000-tonner each.

Eight of the small vessels, of 499 grt, will be fitted with M.A.N. engines built under licence by Euskalduna, while the ninth will have a M.A.K. engine delivered direct from the factory in Germany. All the larger vessels, of 4,000 and 5,000 dwt, will be fitted with M.A.N. engines built in Spain. All orders will be spread over a period and delivery dates are 12, 18 and 24 months ahead. The credit has been confirmed to be 75 per cent over 5 to 6 years, at an interest rate of 6.5 per cent, and the collateral is exclusive first priority in the vessel built.



T2 TANKER RECONSTRUCTION

The Niarchos T2 tanker "World Treaty" is at present being reconstructed into a bulk carrier at the Niarchos shipyard at Skaramanga, Greece. During the process of reconstruction the ship's deadweight tonnage is being increased from 16,616 to 21,650 dwt. The new midships section for the vessel is seen here under construction at the yard



LATEST NORWEGIAN CAR FERRY

The car and passenger ferry "Holger Danske", built at Hamburg-Harburg by Hanseatische Werft GmbH, has been handed over to K/S Jens C. Hagen & Co, Oslo. She has been designed for service between Aarhus in Denmark and Oslo. The principal dimensions are length b.p. 328ft 1in, length overall 360ft 11in, breadth moulded 51ft 2½in, and draught 13ft 9in. Accommodation has been provided for about 900 passengers and 125 cars. The propelling machinery consists of two Pielstick diesel engines developing 3,000 bhp each, giving a speed of 19 knots

American Shipping Notes

ONE of America's oldest active steamship companies, the Bull Line, has been acquired by the Manuel Kulukundis interests under the name of the Coastwise & Puerto Rico Maritime Corporation. A former coastwise operator which now concentrates on the mainland-Puerto Rico trade, Bull has owned since 1957 by the American Coal Shipping Co, the short-lived $50-mn combination of rail, coal mining and labour interests formed in 1956 to enter the export coal trade. Mr Kulukundis is quoted as saying that the line will be continued under its existing management headed by F. M. McCarthy, who has also been named president of Coastwise & Puerto Rico. No sales price was disclosed, but it is understood that the purchasers assume the debts of the company, reputedly heavy. A previously concluded agreement by American Coal to sell the line to Sea-Land Service was blocked by the Department of Justice, presumably on anti-trust grounds.

Objections To Isbrandtsen Sale

HEARINGS have been under way in New York, under a Federal Maritime Board examiner, on the proposed sale by Isbrandtsen of its liner fleet to American Export Lines, of which Isbrandtsen recently purchased a controlling stock interest. The hearings were precipitated by objections of the Prudential Steamship Corporation, a competitor of both Isbrandtsen and American Export in the Mediterranean trade, that this operational merger of its large opponents' fleets would create an effective monopoly. Jakob Isbrandtsen, president of the Isbrandtsen Co, and Admiral John M. Will, president of American Export, have testified that the plan is justified on grounds of economy and will not harm Prudential. On the other hand Spyros S. Skouras, president of Prudential, and his father Spyros P. Skouras, chairman of the board, have asserted not only that this consolidation of competitive power will ruin their operation, but also that such is the actual intention as expressed in alleged threats by Mr Isbrandsen. These Mr Isbrandtsen has denied. Both American Export and Prudential hold operating-differential subsidy contracts on the Mediterranean route, and an application by Isbrandtsen for similar government assistance has been approved in principle.

German Liner Services to Great Lakes

THE MOTOR VESSEL *Francisca Sartori* was the first ship of the Hamburg owners Sartori & Berger to arrive in the port of Hamburg with the trade name of Michigan Ocean Line amidships. Under the full name of "Michigan Ocean Line—Managers Sartori & Berger" a liner service was inaugurated in 1958 from Chicago and other Great Lakes ports to the Caribbean and North Coast of South America. This service at present is the only one to be maintained on this route, after two competing liner services on the same route had to be suspended. Due to the good results produced by the Michigan Ocean Line, this trade name is also used now for Sartori & Berger's homeward service from the Great Lakes to the Continent. The outward service is maintained at 10 days' frequency under the name of Sartori & Berger, following the discontinuation of the joint service of Hamburg-Chicago Line commencing with this year's season. The service of Michigan Ocean Line, represented at Chicago by the Michigan Ocean Shipping Agency Inc, is maintained at 20-days intervals. While Sartori & Berger now maintain their own service, our correspondent has been informed that A. Kirsten, operating jointly with Leo Adams under the trade name of Kirsten-Lea-Linien, is planning to rename their service Hamburg-Chicago Linie with the consent of Sartori & Berger. (This was reported in THE SHIPPING WORLD last week.)

Japanese Tanker Requirements

A SHORTAGE of 12 tankers in terms of 46,000-dwt vessels in the first half of the 1961 fiscal year is anticipated by the Japan Tanker Owners' Association. The association estimates oil imports during the period will total 20,894,500 kilolitres. Tanker tonnage needed is expected to be 4,378,000 dwt, against 3,788,000 dwt available. The tanker owners are reported to be opposed to the Ministry of Transportation's policy which calls for minimum freight guarantees from oil companies in negotiations for building new tankers. They claim this requirement puts them at a disadvantage in bargaining with petroleum interests under present depressed tanker market conditions.

What was said to be the biggest Japanese tanker built so far was launched at the Kobe dockyard of Ishikawajima-Harima Heavy Industries at the end of April. Of 47,250 dwt, the vessel is the *Toko Maru*, under construction for the Sanko Steamship Co. The main engine is an 18,000-bhp diesel giving a speed of 17 knots. Cost of the tanker was given as Yen 2,206 mn (about £2,206,000).

The world's largest tanker, the 107,400-dwt *Universe Daphne*, completed her maiden voyage on April 19 when she arrived at Tokuyama from Kuwait. Under charter to the Idemitsu Oil Co from Universe Tankships Inc, of Liberia, the vessel brought a cargo of 124,000 kilolitres of crude, it was stated. The tanker was completed last year at the Kure shipyard of National Bulk Carriers Inc, of New York.

THE GIBRALTAR SHIPPING ASSOCIATION have stated that due to heavy increases in overheads and operating costs, the scale of agency fees at Gibraltar will be raised with effect from June 1.

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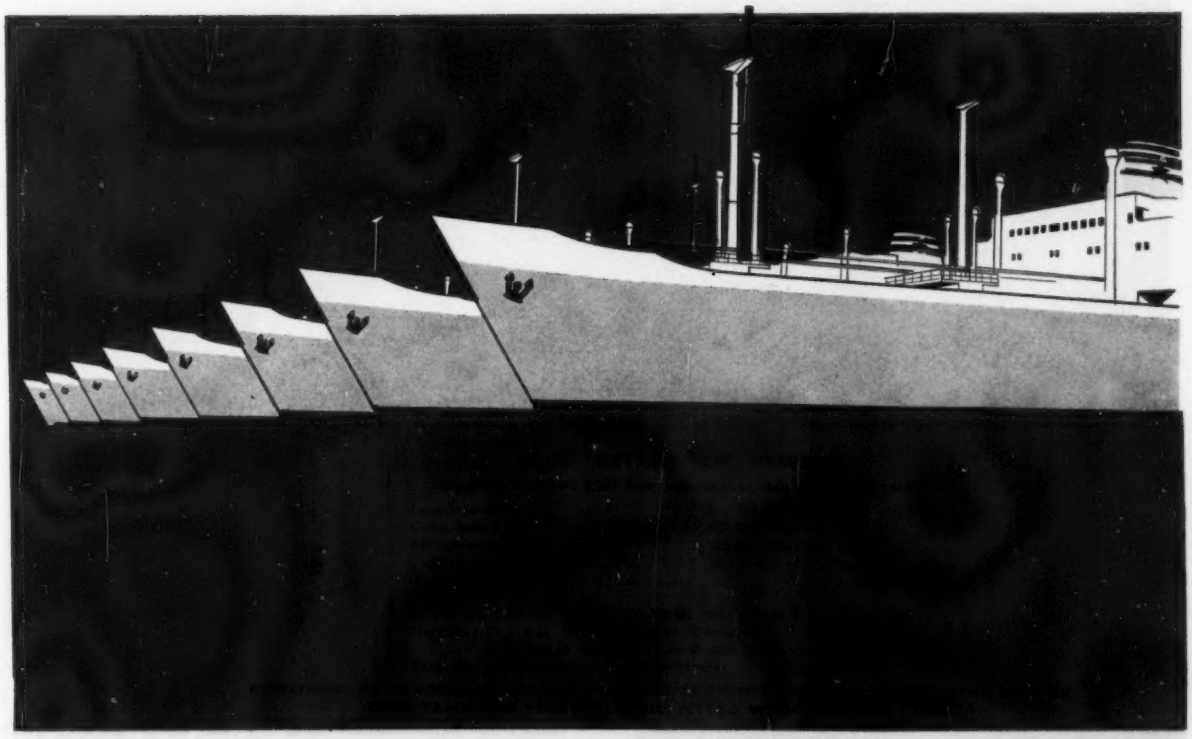

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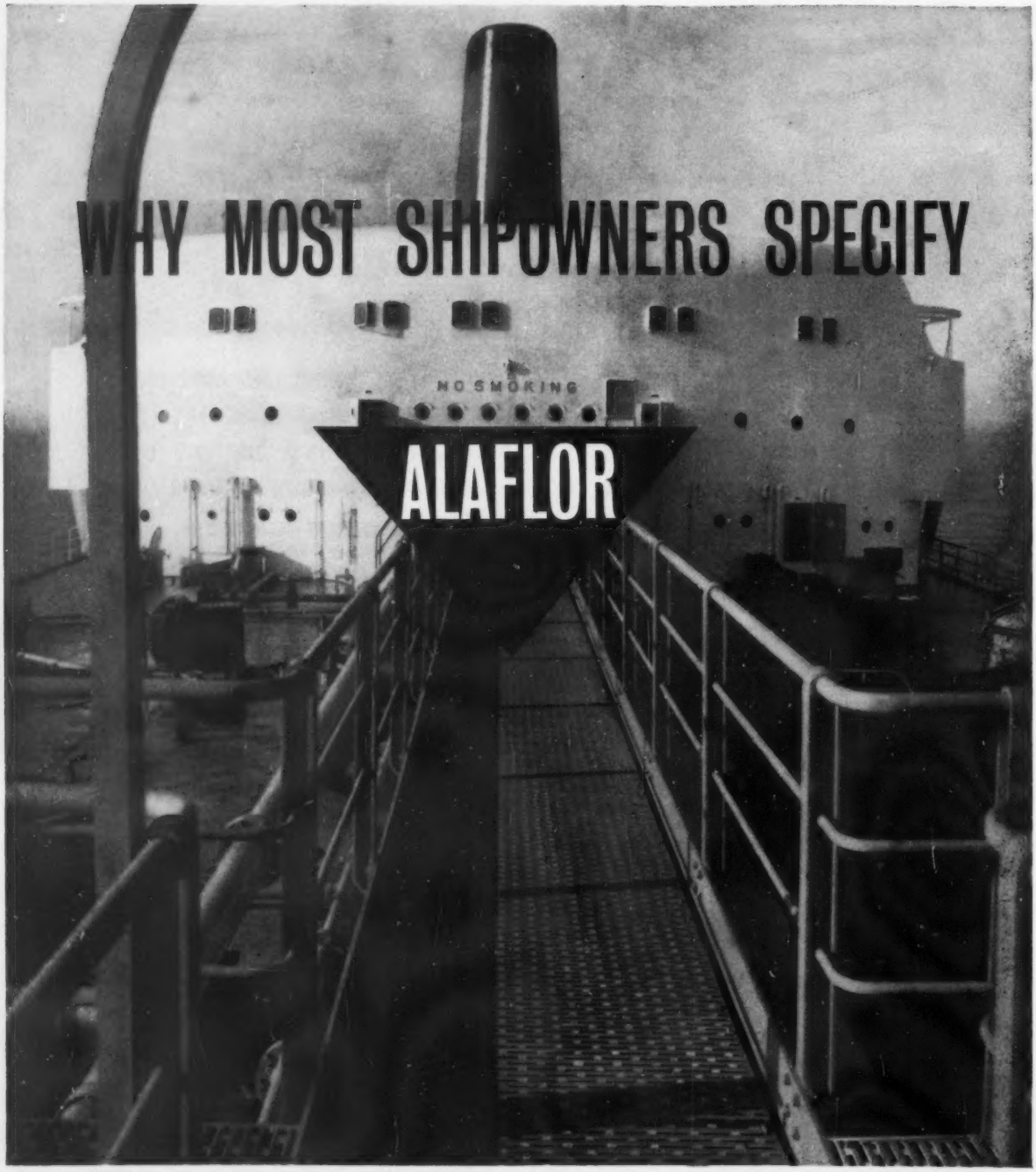

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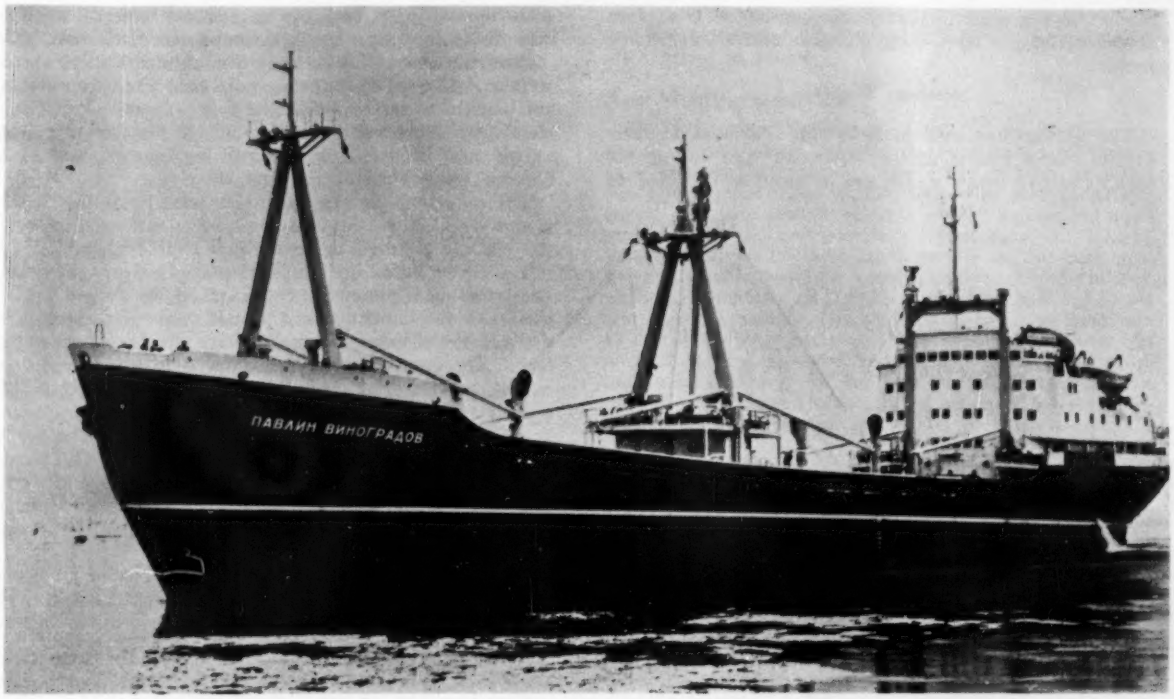


The "Pavlin Vinogradov"

RUSSIAN CARGO SHIP WITH FREE-PISTON MACHINERY

THE FIRST Russian ship known to have free-piston/gas turbine propelling machinery has been delivered. This vessel, the *Pavlin Vinogradov*, about 7,000 dwt, is the first of a series of seven sister ships ordered from the Baltic Shipbuilding & Engineering Works "Serge Ordjonikidze", Leningrad, for the carriage of timber in the northern seas of Europe. The propelling machinery comprises a set of four GS.34 type gasifiers supplying an Alsthom gas turbine coupled through reduction gearing to a single propeller shaft. The gasifiers were built by Société Industrielle Générale de Mécanique Appliqueé (SIGMA) at their Venissieux works near Lyons, where they underwent extensive test bed trials (*SW*, 21.9.60).

The layout of the machinery, which is arranged aft in the ship, will be seen on the accompanying drawings. Unfortunately there is next to no information available about the construction of the *Pavlin Vinogradov*, apart from the fact that she has a displacement of 10,000 tons and a deadweight of about 7,000 tons. A second ship, the *Merzen-Lef*, is under construction and may now have even been delivered.

Principal Particulars

The principal particulars of the *Pavlin Vinogradov* are as follows:—

Length o.a.	399ft 6in
Length b.p.	373ft 11in
Breadth moulded	52ft 10in
Depth	27ft
Deadweight (approx)	7,000 tons
Displacement	10,000 tons
Machinery output	4,000 shp
Speed	14 knots

As will be noted from the accompanying illustration the ship has bipod masts and each of the four hatches is served by derricks This is perhaps unusual as the ships are understood to be built as bulk carriers for timber. One of the derricks is for heavy lifts. The ships are all designed and classified for operation in ice.

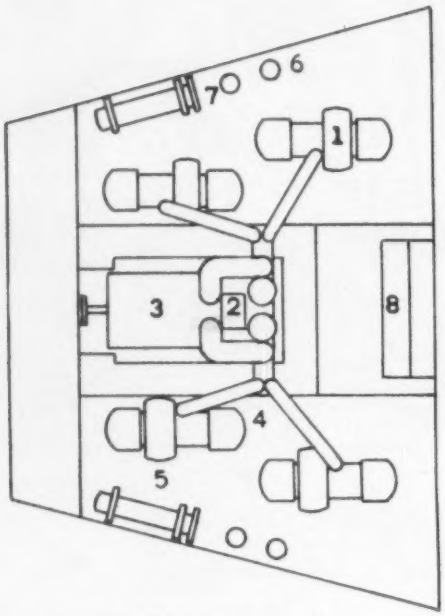
The gasifiers are of standard GS.34 type with bore of 340mm and developing 1,250 ghp, and are of the latest design developed by SIGMA. Air for starting is provided by a motor-driven air compressor. Manoeuvring control is from a platform at the forward end of the engine

GS.34 gasifiers for the Russian cargo ships in the new test house at Venissieux. The test bed is in the background

room. The gasifier intake system consist of two pipes about 8ft long, a dampening chamber and a single large venturi.

Alsthom Turbine

The turbine has been built by Soc. Alsthom at their Belfort works and is of the expansion type having six ahead and two astern stages, and a speed at full load of



Machinery arrangement

KEY

1 Gas generator	5 Coolers
2 Gas turbine	6 Water pumps
3 Reduction gearing	7 Lub. oil pumps
4 Reversing valves	8 Control position

5,500 rpm. It is the first of its type to be designed for an output of 4,000 shp. In order to reduce windage losses when running ahead, a fixed disc has been fitted between the ahead and astern stages, as shown on the accompanying drawing, deflecting gases from the final stage of the ahead turbine upwards and out through the common exhaust outlet in the centre of the unit.

The casing is of cast steel and split horizontally along the centre, the upper half carrying the two ahead manifolds, the two astern manifolds and a rectangular-shaped manifold for the common exhaust. There are two reversing valves operated by servo motor. These valves, which are mounted on the ahead inlet manifolds, are joined to the astern intakes by two pipes, and can be operated from the control console from where the fuel racks are also controlled.

Steel nozzles are fitted and the turbine blading is of stainless steel. The rotor is supported in two bearings and the thrust is located at the forward end. Labyrinth glands are fitted and the entire turbine and the reversing valves are insulated by special lagging material and covered by non-corrosive metal sheeting.

The reduction gearing was constructed by Société Alsacienne de Constructions Mécaniques, Graffenstaden, and the sets are believed to be the first triple-reduction gearboxes to be fitted for marine use. The primary train comprises one pinion and one wheel of forged Ni.Cr steel with case-hardened and ground teeth; the connection between the turbine and the primary shaft is of the rigid type. The intermediate train comprises a pinion and two wheels, the wheel of the primary train being keyed to the second reduction pinion shaft; and the secondary train comprises two pinion shafts and one wheel. The teeth of the intermediate and secondary stages are also case-hardened and ground. A flexible coupling is used between the intermediate and secondary gears. The Michell thrust bearings for ahead and astern movement are incorporated in the reduction gear casing.

Auxiliary equipment include two 75-tons/hour lubricating oil pumps, one as standby, driven by 220-volts electric motors; two 140-tons/hour electric motor-driven fresh water pumps, oil coolers etc.

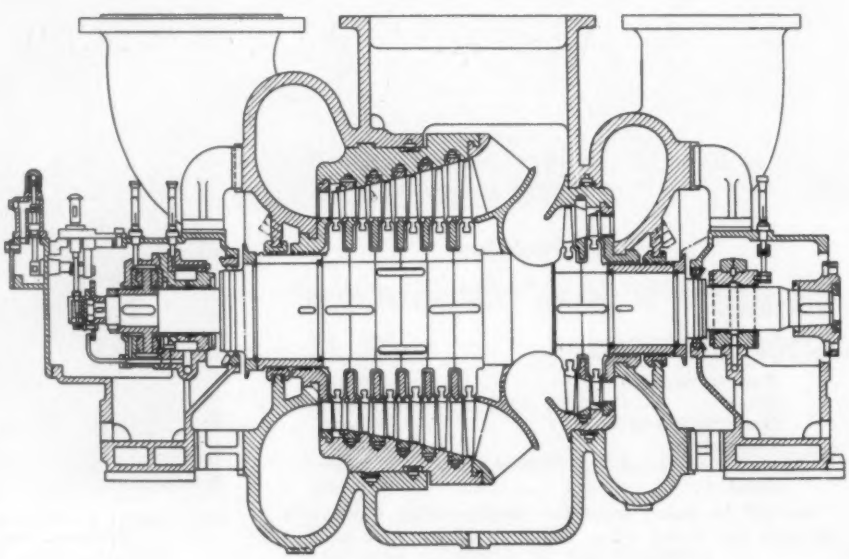
Extensive Tests

Extensive tests of these propulsion sets have been carried out both on the test bed and at sea: after sets had been on test at the SIGMA works at Venissieux one complete set was again tested at the shipyard in order to assess the characteristics and performance of this type of propelling machinery. The characteristics of the fuel used on the test bed are as follows:—

Specific gravity	0.948
Viscosity, Engler at 50 deg C	11.5
Viscosity, Engler at 100 deg C	1.8
Calorific value (cal/kg)	9,600
Sulphur content (per cent)	3.10

The characteristics of the fuel used in normal service are as follows:—

Specific gravity	0.931
Viscosity, Engler at 80 deg C	2
Viscosity, Engler at 100 deg C	1.58
Calorific value (cal/kg)	9,650



Alsthom gas turbine. Output 4,000 shp at 5,500 rpm. A fixed disc is fitted to reduce windage losses

Table I gives the results obtained at different loads with four gasifiers operating ahead and astern. It has been established that an output of 4,500hp was obtained on overload, and that the specific fuel consumption obtained at normal load of 4,000 hp was 193 gr/hp-hr. Table II gives the maximum performance obtained with three and two gasifiers in operation.

TABLE I

	Ahead				*Astern*		
Horsepower ...	2,078	2,940	4,164	4,512	1,074	1,493	1,667
Specific fuel cons. (gr/hp-hr) ...	223	207	193	191	544	535	—
Prop.-shaft speed (rpm) ...	92	102	114	119	71	80	86
Turbine inlet press. (kg/sq cm)	2.04	2.55	3.20	3.42	2.51	3.13	3.45
Temperature (deg C) ...	351	414	469	480	417	491	—
Gas outlet (kg/sec) ...	2.91	3.48	3.86	4.03	3.26	3.67	—

TABLE II

	3 gasifiers	*2 gasifiers*
Horsepower	3,013	1,447
Specific fuel cons. (gr/hp-hr)	209	266
Prop.-shaft speed (rpm)	102	78.5
Pressure (kg/sq cm)	2.66	2.43
Temperature (deg C)	447	426
Gas outlet (kg/sec)	4.24	4.30

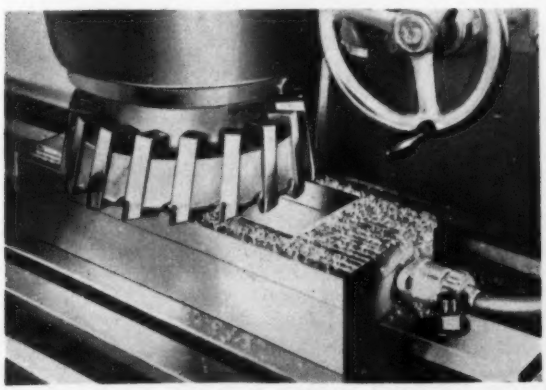
The fuel oils used do not seem to be much like those used in Britain and are probably light Middle East type fuels.

During sea trials various combinations of gasifiers were tried out including first two gasifiers on one side then two on the other, one on each side, ahead with three gasifiers and with only one, full, three-quarter and half-speeds ahead and astern. The *Pavlin Vinogradov* has recently been to the London Docks to discharge grain.

RECENT TECHNICAL DEVELOPMENTS

Magnetic Chucks

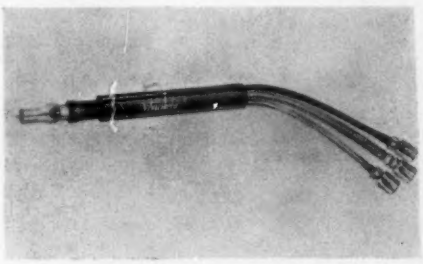
A WIDE range of magnetic chucks and accessories, manufactured by the Binder Magnete Company, Germany, is now being marketed in Great Britain by Magco Ltd, Lake Works, Portchester, Hants, who have been appointed sole selling agents. The range, which may be divided basically into three main types, is considerable, and varies from quite a small unit up to one as large as 5ft by 20in. These three types are (1) a standard transverse pole type chuck; (2) a wide spaced longitudinal pole division type chuck, and (3) a narrow spaced longitudinal pole division type chuck. The various types of pole faces associated with these units have made it possible for machining to be carried out easily when previously the work had been extremely difficult to hold on a magnetic chuck. In fact these units have made it possible for the transfer from comparatively light grinding machines to heavy machine tool operation. The full range also includes circular chucks up to 40in dia with various pole faces. All chucks are wound for standard voltages of 24, 110 and 220 DC. Suitable rectifiers are provided as needed.



Magnetic chuck marketed by Magco Ltd

New Welding Equipment

THE full range of products of the Tec Torch Company, U.S.A., is now being marketed in Great Britain by Interlas Ltd, Ampthill, Birmingham. This range includes air-cooled and water-cooled argon welding torches in both pencil and angled types for manual welding, machine torches for automatic welding and spot guns with control units for TIG spot welding. Features of these argon torches are the very light weight—only 3 oz—and the patented transparent Vycor nozzles, which allow unrestricted visibility of the work and save 20 per cent argon gas consumption. Pencil models can be fitted with 45 degree and 90 degree angled nozzles in addition to straight nozzles. As they use only 3in long tungsten electrodes which can be used down to the last ½in, the overall height of the torch in use is reduced to an absolute minimum for easy access inside small diameter tubes and other such confined spaces.



Interlas Visuweld argon welding torch

The Tec spot gun is a water-cooled 350 amp portable tool which will spot-weld stainless steel, mild steel, nickel alloys, brass, copper, copper monel, inconel, etc., up to ⅛in thickness from one side only to a second piece of material of absolutely any thickness. The strength of the weld is equal to that of resistance spot welders.

Interlas Limited are also producing the largest ever single unit welding platens. A platen measuring 11ft by 5ft and weighing nearly three tons was recently delivered to Marston Excelsior Ltd, Wolverhampton. This was not for welding, however, but was to be used as an auxiliary table for a very large boring machine mounted in a pit. Since then a number of 12ft by 6ft by 6in platens have been sold and they are at present being manufactured.

Pyrene Foam-Compatible Dry Chemical

FOAM is generally accepted as being the most effective medium for extinguishing fires involving highly inflammable liquids, and has the added advantage that the foam creates a "blanket cover" that provides a seal against re-ignition. However, in certain instances, such as spillage fires when immediate action is beneficial, dry chemical, an extremely quick fire extinguishing agent, proves more effective. But experience has shown that standard forms of dry chemical are incompatible with foam, the powder activates a chemical process which decreases the consistency of the foam, which lessens the efficiency and durability of the foam cover.

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THE telephone number of the Shipbuilding Conference, Shipbuilding Employers' Federation, Dry Dock Owners and Repairers Central Council and the National Association of Marine Engine Builders is now Belgravia 5131/5.

Oil Topics

THE BP TANKER FLEET

ONE SECTION of the attractively-produced annual report and accounts of The British Petroleum Co Ltd discusses the size of the group's tanker fleet. This continues to grow, although the increase in size during 1960 was comparatively small. The deadweight tonnage of tankers owned by the group's own companies and those owned by tanker finance companies increased from 2,644,000 dwt at the end of 1959 to 2,701,000 dwt at the end of 1960. The number of ships involved is now 144, and of these vessels 49 per cent by tonnage consists of ships of 28,000 dwt or more. There are also vessels of associated fleets in which the group has a 50 per cent interest, which number 15 ships of 323,000 dwt. Tonnage on charter fell during the year from about 2,800,000 dwt to about 2,600,000 dwt. Details of wholly or partly owned fleets are given below:

Company	BP interest (Per cent)	Number of Vessels	Tonnage	On order or under construction	Approx. tonnage
BP Tanker Co Ltd BP Clyde Tanker Co Ltd	100	106	1,647,000	30	1,365,000
Tanker Charter Co Ltd ...	*	17	569,000	—	—
Clyde Charter Co Ltd ...	*	13	293,000	—	—
Societe Maritime des Petroles BP	70	8	192,000	2	94,000
The Lowland Tanker Co Ltd	50	11	181,000	4	78,000
Warwick Tanker Co Ltd	50	2	71,000	—	—
Nordic Tankships I/S, Copenhagen	50	2	71,000	—	—

* Tanker finance companies

Since the middle of 1960 all the group's tankers have been operating on normal routes and at normal speeds, apart from those laid up. These latter numbered 22, all older and smaller ships, at the end of 1960.

Low Tanker Rates in April

THE MONTH of April included the period when there were a large number of unfixed vessels in early loading positions, especially in the Persian Gulf area, and fixtures were reported at levels lower than for some very considerable time. Reporting business during the month, Davies & Newman Ltd state that there were comparatively few requirements on the part of major companies, with the result that the majority of the fixtures from Persian Gulf to U.K. Continent-Mediterranean were on the basis of Scale minus 76 per cent, with U.S.M.C. minus 80 per cent being accepted for discharge U.S.N.H. The reduction in rate once again brought forth a renewed interest on the part of Japanese charterers and about a dozen vessels were taken on single voyage basis at U.S.M.C. minus 70/72½ per cent, one supertanker accepting U.S.M.C. minus 80 per cent for spot loading. In addition, these charterers secured several vessels for three/seven voyages at rates varying from U.S.M.C. minus 69 to minus 73 per cent, for early commencement, and a supertanker for about 15 months trading at U.S.M.C. minus 71 per cent. The position in the Caribbean Sea area has been additionally affected by the large amount of relet tonnage available. Trans-Atlantic business was concluded on the basis of Scale minus 60/65 per cent, with 5 per cent lower being paid for Mediterranean discharge. The net result, they report, has been a large increase in the laid-up total, which is now some 221 vessels of about 3,495,000 tons deadweight, an increase during the month of 34 vessels and about 720,000 tons deadweight. There has been very little inquiry for clean tonnage, and the trans-Atlantic rate has fallen to Scale minus 50 per cent. One major company secured a medium sized clean carrier from the Persian Gulf to Far Eastern destinations at Scale minus 43 per cent, loading early May. Apart from the Japanese fixtures referred to above, the only period business reported is that of two medium-sized black oil vessels which were taken by an American major company for six months voyages at Scale minus 42½ per cent, with charterers' option of a further six months at Scale minus 40 per cent; both vessels are for early commencement. Lambert Bros Ltd report that Caltex has fixed a 47,000-dwt turbine tanker, built 1959, on time charter for seven years at the low figure of 12s 3d on the basis of 16¼ knots on 96 tons fuel oil.

RECENT SHIP SALES

CARGO steamer *City of Newport* (ex-*Samtweed*, launched as *William R. Cox*, 10,657 dwt, 7,275 grt, 4,459 nrt, built 1943 by Bethlehem Fairfield Shipyard) sold by Hall Line Ltd to N. & J. Vlassopulos, London, for £106,000 with delivery Bombay May.

Cargo steamer *Amstelaan* (ex-*Enggano*, ex-*Van der Waals*, ex-*Robert Fechner*, 10,605 dwt, 7,264 grt, 4,420 nrt, built Savannah, Ga., 1943 by Southeastern Shipbuilding Corporation) sold by N.V. Stoomvaart Nederlandsche to Hong Hong trading buyers for about £100,000 with survey due.

Cargo steamer *Albino* (ex-*Absirto*, ex-*Glenn Curtis*, 10,850 dwt, 7,145 grt, 4,476 nrt, built Richmond, Cal., 1943 by Permanente Metals Corporation (Shipyard No 2) sold by Arisona Argentina S.A., Buenos Aires, to Lebanese buyers for £94,000 with delivery May at Montevideo.

Motor vessels *Temnaren* and *Glimmaren* (each of about 6,000 dwt, 3,200 grt, 1,700 nrt, built 1939 by A/B Lindholmens Varv and Eriksbergs M.V. respectively) sold by Rederi A/B Transatlantic to Olaf Wallenius, Stockholm, for about £140,000 each.

Motor ore carrier *Ferroland* (12,620 dwt, 8,674 grt, 2,238 nrt, built by Eriksbergs M.V., launched 1943 completed 1945) sold by Angbts. A/B Ferm to French buyers for £185,000.

Motor vessel *Elisabeth* (960 dwt, 499 grt, 292 nrt, built 1957 by Lidingoverken A/S) sold by Rederi A/B Samba, Gothenburg, to Dutch buyers for about £90,000.

Cargo steamer *William R. Tolbert* (ex-*Andrew A. Humphreys*, 10,475 dwt, 8,615 grt, 5,769 nrt, built New Orleans 1943 by Delta Shipbuilding Co Inc., converted from tanker and lengthened 1954) sold by Seatankers Inc., Monrovia, for $455,000 with reclassed delivery Japan.

Motor vessel *Parnass* (2,350 dwt, 1,779 grt, 1,178 nrt, built 1953 by Werft Nobiskrug) sold by Partenreed. m.s. Parnass (F. Laeisz), Hamburg, to South African buyers and to be renamed *Iduna*.

Cargo steamer *Transerie* (ex-*Asgard*, ex-*Thor*, ex-*Transporter*, 1,763 dwt, 1,538 grt, 843 nrt, built 1911 by Blyth Shipbuilding Co Ltd) sold by Poseidon Schiffahrts GmbH to Lebanese flag operators and renamed *Ronda*. She was given new engines in 1949.

Cargo steamer *Atlantic Star* (ex-*Royal Prince*, ex-*Elgin Park*, launched as *Fort Simcoe*, 10,727 dwt, 7,160 grt, 4,291 nrt, built 1945 by the Prince Rupert Dry Dock & Shipyard Co) sold by Atlantic Freighters Ltd, Panama, to Turkish buyers for about £110,000 with delivery August, but subject to licenses.

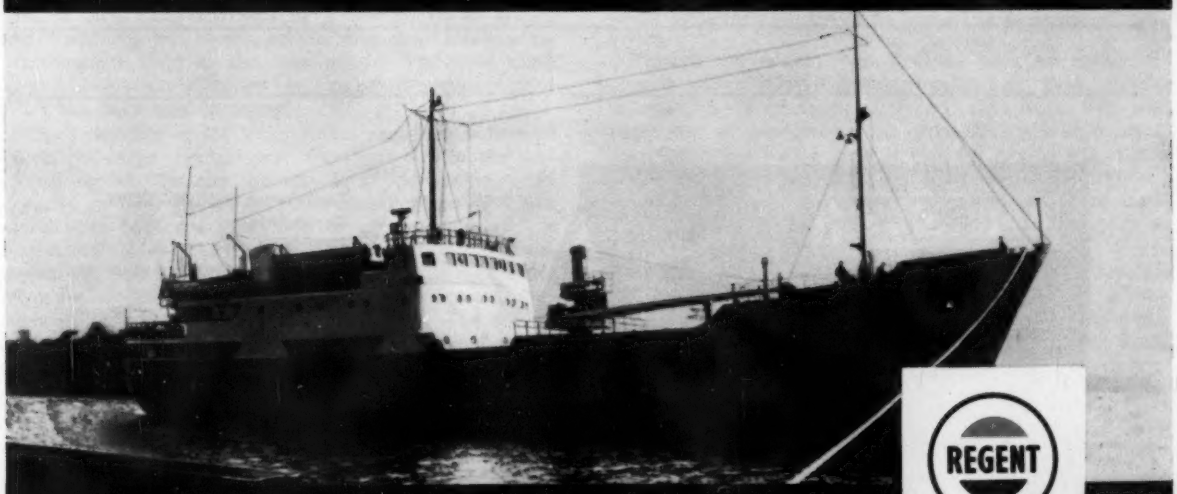
Cargo steamer *William Pearman* (1,552 grt, 885 nrt, built 1942 by Burntisland Shipbuilding Co Ltd) sold by Central Electricity Generating Board to Belgian shipbreakers.

Tank steamer *Maracaibo* (9,306 grt, 5,393 nrt, built Chester, Pa., 1942 by Sun Shipbuilding & Dry Dock Co) sold by Pan Shipping Corp., New York, to Italian shipbreakers for $235,000 with prompt delivery Trieste.

Cargo steamer *Royal Emblem* (4,859 grt, 2,737 nrt, built Sunderland 1940 by J. L. Thompson & Sons Ltd) sold by Hall Brothers S.S. Co Ltd to Hong Kong buyers for £62,000 with delivery July-August at Hong Kong. She will probably be broken up.

CALTEX

Every year, the R.R.S. JOHN BISCOE and her sister ship the R.R.S. SHACKLETON, overcome the sub-zero temperatures and perilous ice-packs of the South Polar regions to relieve the Falkland Islands Dependencies Survey bases. The members of the Survey are based in Antarctica and are linked with civilisation by the annual visits of these ships. In turn the ships rely on lubrication by Caltex marine products for safe, trouble-free operation of all working parts under the most adverse conditions.



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Cargo Aircraft for BEA

DEVELOPMENT OF THE AIRLINE'S ALL-CARGO SERVICES

By D. M. Brace

WITH every week that passes there are growing signs that the world's airlines are becoming increasingly aware that a huge potential market in the carriage of cargo by air lies virtually untapped. Airlines, which have hitherto paid little more than lip service to those who have cargo to move from one point to another, have suddenly started to woo these possible customers. There is talk of introducing a lower system of charges, of simplifying the extremely complicated commodity rate structure which at present controls the rates charged, of speeding up delivery and collection services. But all these measures will be of little avail without the right type of aircraft to move the cargo. The recent announcement that British European Airways had placed a contract for three special cargo aircraft—a contract worth over £1½ million—came, therefore, as a specially welcome sign that this airline, at least, is determined that its attempts to secure an increase in cargo movements is more than just a token.

To be fair to BEA it must be admitted that the Corporation has been steadily building up its cargo carryings over a number of years. In fact in 1959-60 it operated almost 30 per cent more cargo-ton-miles than in the previous year. The corporation has, for some time past, been flying a number of all-cargo services to several points in Europe, and has also been carrying considerable quantities of cargo on normal passenger services. The all-cargo services have been operated by a few converted DC-3s and Viscounts, but these aircraft, with their side-loading arrangements (and in the case of the Viscounts small doors) have severely limited the size of consignments that BEA has been able to accept.

The possibility of the Corporation acquiring a fleet of special all-cargo aircraft was foreshadowed in the last annual report. "Despite the very large increase in cargo capacity on passenger aircraft it is apparent that BEA will continue to require a small fleet of all-cargo aircraft," it was stated. "This requirement arises from two considerations. The first is the desirability of being able to carry all types of freight, including consignments too large or otherwise unsuitable, for passenger aircraft. The second is the commercial need for freight outlets on certain routes at times, particularly at night, when passenger services would not normally be scheduled. If BEA fails to provide freight outlets at these times it will lose traffic to competitive carriers, air and surface, and because it is not providing a comprehensive freight service, will find it difficult to attract traffic to fill the other capacity which it has available.

"In addition to these commercial considerations there is also a strong case for BEA having a specialised freight aircraft so that it can develop the handling and loading techniques which will be essential for future large-scale freight operations. From this point of view there are attractions in having a specialised freighter with front or rear end loading doors and we are giving serious consideration to the Armstrong-Whitworth Argosy. The capacity of this aircraft may, however, prove to be too large for BEA's requirements and it may be more economical for the Corporation to convert a number of Viscount 800s to a cargo configuration."

That report was issued last autumn. Just over a fortnight ago I watched Lord Douglas (chairman of BEA) sign a contract for three Argosy cargo aircraft. So presumably in the past six months BEA has come to the conclusion that cargo traffic is expanding at a rate fast enough to keep these big machines fully engaged.

The first aircraft is due to be handed over in November, and all three will be in service by next spring. It is expected that they will be first introduced on the Copenhagen, Milan and Manchester all-cargo services, but it is intended that they will eventually take over all BEA's existing all-cargo scheduled operations. At present scheduled cargo services are operated by BEA to Paris, Brussels, Milan, Rome, Dusseldorf, Frankfurt, Amsterdam, Copenhagen, Manchester, Glasgow and Belfast. On a planned utilisation of about 2,200 hours per aircraft per year the three Argosies will be capable of operating about 16,200,000 cargo-ton-miles, which is roughly the same as the whole of BEA's cargo operations last year—on both all-cargo and passenger flights.

Though the Argosy was designed with an ability to operate in a combined passenger-cargo role, BEA intends to maintain its machines solely on cargo work, with the result that all windows on the cargo deck will be skinned over. Operating with a crew of two, the Argosy will cruise at 265 mph at 18/20,000ft, and will be capable of carrying payloads of about 10½ tons over ranges of more than 500 miles. It is fitted with four of the now fully-proven Rolls-Royce Dart engines.

Speaking after the signing of the contract, Lord Douglas said he believed air cargo was on the edge of a big breakthrough. It was, however, essential that rates be reduced; but he believed that even more important was the need to simplify the present rate structure. An IATA meeting would, he said, be held in the course of the next few weeks

The Armstrong-Whitworth Argosy cargo aircraft in BEA colours

when the whole question of European air cargo rates was to be considered. Lord Douglas would give no indication of what BEA's proposals would be at that meeting, but he left those who heard him in little doubt that the Corporation would be pressing for a reduction of the present rates.

It is, of course, essential for the ground handling techniques to be speeded up if cargo is to be moved cheaply and quickly. Lord Douglas revealed that BEA is now spending £250,000 on new cargo sheds at London Airport. No doubt these sheds have been designed to work in conjunction with the Argosies, and to this end they will probably incorporate a roller-mat system of moving cargo. This will enable a straight-through operation from aircraft to delivery lorry, for the Argosies are to have a system of roller floors, designed to work in conjunction with prepacked pallets.

With the purchase of the three aircraft by BEA all ten aircraft in Armstrong-Whitworth's initial production batch of Argosies have been sold—the other seven having been acquired by the American cargo operator, Riddle Airlines Inc. In addition, the RAF has ordered a total of 56 Argosies for Transport Command. The Argosy started as a private venture by the manufacturers four years ago, and it is estimated that £13 mn has so far been expended on the project. Though the big RAF order has no doubt helped considerably, it would seem likely that a number of further orders will have to be secured before the production line can break even.

Effect of Reduced Freight Rates

Undoubtedly a reduction in rates would help the sales prospects for the Argosy considerably. It has been estimated that if European cargo rates were reduced by 30 per cent the volume of traffic would increase by 60 per cent; if the rates were reduced by 40 per cent then traffic would double. Another advantage which an aircraft of this type offers is its ability to carry really big packages. The Argosy's cargo hold is 46ft long, 10ft wide and 6ft 8in high. The market for consignments too big for BEA's present cargo-carrying aircraft may probably be as much at 40 per cent of existing cargo traffic.

It must, of course, be remembered that over and above the Argosies, BEA will still be offering a considerable amount of cargo space on the normal passenger flights. The Vanguard and, to a lesser extent, the de Havilland Trident have large under-floor holds and, at a 70 per cent passenger load factor, will be capable of carrying a maximum of 4½ tons and 2½ tons of cargo respectively. It is estimated that in five years time the Corporation will be producing annually more than 100 mn capacity-ton-miles of cargo capacity on its passenger services alone; this figure can be compared with the total of 15 mn load-ton-miles of cargo carried in 1959-60 on all-cargo and passenger flights. Put in slightly less complex language, in the last financial year for which results are known (to 31 March 1960) BEA carried 36,395 tons of cargo and 7,848 tons of mail. By the mid-1960s the airline will have the capacity to carry well over 100,000 tons of cargo annually, and Lord Douglas has intimated that if traffic increases to the extent that the airline hopes, a further contract for Argosies may be forthcoming, so increasing that capacity still further.

There is yet one further factor which must be taken into account in considering the future possibilities for BEA cargo traffic—the European Common Market. It is strongly believed that the United Kingdom is to join the Common Market. Should this materialise there will undoubtedly be a considerable increase in trade between Britain and the Continent. Just how much of the increased carryings the airlines would be able to capture must, at this stage, remain problematical, but there can be little doubt that demand for air cargo movement would be increased. It could well be that the joining of Britain with the rest of Europe would not only be a great fillip to BEA's chances, but would also greatly enhance the possibilities of selling Argosies to some of the big European airlines—for there is no comparable aircraft in production in Europe.

But perhaps that is gazing a little too deeply into the crystal ball. The fact remains that BEA has become the first airline, outside the United States, operating over a short-haul network of routes, to place an order for a fleet of aircraft specifically for the operation of all-cargo services. Given the anticipated cut in freight rates, there would seem to be little doubt that the Argosies will, in the years ahead, find themselves fully occupied.

Armstrong-Whitworth Argosy

Max. take-off weight	88,000 lb
Max. landing weight	80,000 lb
Average cruise speed	280 mph
Range with 20,000-lb payload	1,610 statute miles
Span	115ft
Length	86ft 9in
Cargo cabin volume	3,680 cu ft
Cargo floor length	47ft
Cargo floor width	10ft
Cargo floor sill height	4ft
Minimum cargo cabin height	6ft 8in
Minimum dimensions of cargo doors:	
Front door width	8ft 4in
Front door height	6ft 8in
Rear door width	8ft 8in
Rear door height	6ft 8in

BOOK REVIEWS

Tanker Directory of the World, 1961, edited by Leonard G. Fay (Terminus Publications Ltd, Rosebery House, Bream's Buildings, Fetter Lane, London EC4. Price 60s.)

This is the third edition of this now well-established annual covering the world's tankers. It follows the same general format as its predecessors, but additions have been made to enhance its usefulness as a work of reference. It contains nine illustrated articles by specialists in various fields connected with tank shipping. Also included are the Suez Canal Navigation Rules for vessels carrying petroleum, and the statistical section has been enlarged. The directory section includes a complete alphabetical list of tankers of over 400 dwt, giving the flag, owners, tonnage, type of propulsion, builders and year of build; an alphabetical list of tanker owners and/or managers, with their addresses and fleets; and a list of tankers in groups of descending order of deadweight tonnage. To the last list there has been added this year the summer draught of each ship.

Antarctic Raider, by W. R. D. McLaughlin (George G. Harrap & Co Ltd, 182 High Holborn, London WC1. Price 15s.)

The author has based this novel on events during the last war when a German auxiliary cruiser penetrated to Antarctic waters and succeeded in capturing the entire Norwegian whaling fleet. The novel differs from the factual event in several ways but is no less thrilling for that. Capt McLaughlin's experience of the sea is obvious from the authentic descriptions given to the types of weather experienced in Antarctic waters. The work is very well written, and the reader will find difficulty in putting it down once having opened the covers.

BRITISH UNITED AIRWAYS' services between London (Gatwick) Airport and Rotterdam are being operated with Viscounts since May 6. With a flying time between the two points of only 50 minutes, the new services now provide the fastest link between Britain and Holland.

A NEW AIRCRAFT, under active consideration by Armstrong-Whitworth Aircraft, of Coventry, would be able to carry caravans as well as cars of all sizes. The "Airbus" and "Air Ferry" are being studied by the company as a development of its Argosy cargo and passenger aircraft. It would be able to carry eight cars in the hold, and up to 32 passengers on the upper deck, at a speed of 240 mph, when used in ferry form, and as a 270-mph airbus the aircraft would carry up to 114 passengers.

Air Charter Market

GROWING AMERICAN INTEREST IN CHARTER BUSINESS

By a Special Correspondent

WHILE in April airlines fought a battle of words and figures, with the Air Transport Licensing Board and with each other, for the right to operate regular and inclusive air tour services, brokers on London's air charter market continued their day-to-day business of fixing aircraft to carry, perhaps, a ship's crew from Hong Kong to Rotterdam, an opera company from London to Moscow, or a cargo of chickens from Copenhagen to Milan. Although it was by no means a "red letter" month on the air section of the Baltic Exchange, it did provide a period of moderate activity, particularly during the first two weeks. Throughout April a limiting factor on the amount of business conducted was the shortage of suitable aircraft.

Lack of Prompt Aircraft

With the impetus of March's heightened business conditions to help it along, the first week of April opened on a reasonably lively tone. Brokers on their return to work after the Easter holiday were brought quickly back to workaday consciousness by a strong flow of new orders on to the market. Successful conclusion of business was sometimes frustrated, however, by the lack of prompt aircraft. As is so often the case, ships' crew movements demanded most attention from the brokers, with the Far East route featuring a great deal. A number of westbound fixtures from Hong Kong and Tokyo were concluded, and negotiations for the transportation of ships' crew to and from India were undertaken. Lambert Brothers Ltd commented at this stage that much of the inquiry, particularly on the Far East route, had been complicated because different brokers had been working variations of what eventually transpired to be the same inquiries.

The movement of seamen again dominated the market during the second week of April, when conditions generally continued to remain reasonably lively, at least as far as inquiries were concerned. Inquiries for the movement of ships' crews added a little extra colour during this week by being of a slightly more varied nature than usual. The number of fixtures concluded on the market during this period was not large, and business that was undertaken was largely for long-haul work. That old bogey of brokers, "aircraft unavailable", was again present to restrict the amount of firm business done in the short-haul section, and particularly was there a shortage of twin-engined equipment, even for mid-week hops. A fixture that was made about this time, however, was for the carriage of bullion from London to Zurich in a Viking.

Cargo Inquiries

Conditions on the market quietened still further during the third week of April, despite a reasonable supply of fresh inquiries, but much of this inquiry was for the carriage of cargo. When put to the full test many of these cargo inquiries could afford only ballast rates, and so no business resulted. Potential ships' crew business on the Far East route also failed to reach satisfactory conclusion, but for a different reason—few aircraft available. Many of these inquiries in the Far East section were for transfers in early May, when equipment was particularly scarce. This shortage of aircraft was still being felt in the European short-haul section, especially for prompt movements. Some operators who had been too optimistic in estimating the amount of work they could undertake and were forced to sub-charter to fill weekend commitment, were experiencing an uncomfortable time.

The search for sub-charter aircraft continued into the last week of April, and one or two operators were still suffering anxious moments, although brokers did what they could for them. During this fourth week fresh inquiry was coming forward in moderate quantity. Inquiries in the Far East section, which supplied the strongest feature of the market at the end of April, were largely for May movement. Fortunately the position was made a little easier by the appearance on the market of a small demand for eastbound movements. This enabled operators to position themselves for the heavy demand westwards from the Far East.

More evidence of America's growing interest in Britain and Europe as a market for charter business came to light during April. Another American airline has opened a sales office in London. This time it is Trans-Atlantic Airlines Inc., a company based in California. Contrary to what its title might suggest, the company is not seeking loads for carriage across the Atlantic. In fact, the company, with a fleet of three DC4s, is confining operations to the European and Far East markets. The DC4s are able to carry up to 74 passengers, or are available in an all-cargo configuration. It is possible that DC6 aircraft will be added to the fleet at a later date.

Air Charter Exchange

Air Charter Exchange, an American organisation that has already established an office in London, was in the news last month when the parent concern, the Independent Airlines Association, announced that it was combining with the Supplemental Air Carrier Conference. The Supplemental Air Carrier Conference has in the past acted as spokesman for America's "non-scheduled" airlines in the fields of public, Congressional and Governmental relations, and it will continue to perform this function in the combined organisation. This enables the Independent Airlines Association to concentrate its activities on obtaining and developing traffic for the 24 or more airlines it represents.

It is stated that Air Charter Exchange is to launch "an aggressive campaign" to capture business in the international charter field. The airlines concerned, who offer a fleet of about 140 aircraft, including DC7s and Constellations, are: Aerovias Sud Americana; Airlines Transport Carriers; American Flyers Airlines Corporation; Associated Air Transport; Blatz Airlines; Capitol Airways; Central Air Transport; Currey Air Transport; Great Lakes Airlines; Imperial Airlines; Modern Air Transport; President Airlines; Paul Mantz Air Service; Purdue Aeronautics Corporation; Quaker City Airways; Saturn Airways; Sourdough Air Transport; Southern Air Transport; Standard Airways; Trans-Alaska Airlines; Trans-International Airlines; United States Overseas Airlines; World Airways, and World Wide Airlines Inc.

Response to Flying Tiger Line's offer to carry groups across the Atlantic for rates as low as £35 8s return (*SW*, 12.4.61) is reported to be "very good." Inquiries have been coming forward for both this year and for 1962. A certain amount of business is being lost because of the United States Civil Aeronautics Board refusal to allow more than one group to share an aircraft.

Danish-built Ship with New Cargo-handling Gear

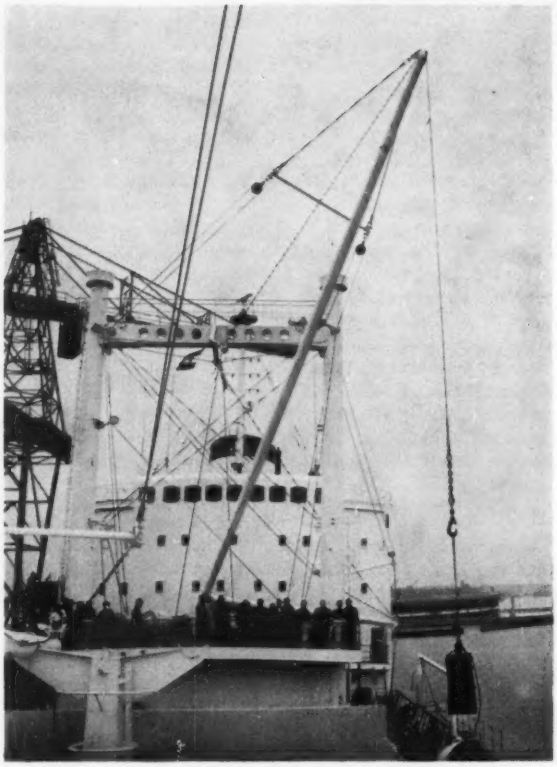
THE "STOVE TRANSPORT"

A SHIP which has recently been completed by Burmeister & Wain is the *Stove Transport*. This vessel, which was the first to be built in the Copenhagen shipyard's new building dock, is owned by Lorentzens Rederi Co A/S, Oslo. It is of interest for its use of the new Velle cargo-handling system which was described in THE SHIPPING WORLD of 28 December 1960. This system, it may be recalled, replaces the normal pair of vang-controlled derricks used for cargo handling by the union purchase method by a single derrick controlled by two topping lifts, which acts as a cargo crane. It is claimed to be the fastest and cheapest general cargo handling system in the world. The *Stove Transport* is the first ship to go to sea with Velle derricks (or, as the firm calls them, Velle Ship-Shape Cranes).

Although equipped with derricks, the *Stove Transport* has been designed as a bulk carrier. She is a two-deck ship with wing tanks beneath the side decks. There are six holds, and bridge, accommodation and machinery are all arranged aft. The principal particulars of the ship are as given below:

Length b.p.	470ft
Breadth moulded	65ft 6in
Depth moulded	41ft
Draught at summer load	29ft 3in
Deadweight tonnage	15,600 tons
Loaded speed on trials	14.0 knots

The six derricks fitted, one to each hold, are worked from goal-post type masts situated between adjacent pairs of hatches. The derricks are of 8 tons capacity, and each is worked by three winches. One winch controls the cargo fall, and the other two operate the two topping lifts. A special system of reeving of the topping lift falls is employed which allows one winch to provide topping motion and the other veering. The controls for these two winches are combined in a single joy stick, the movements of which are followed by the derrick head. The only other control is a lever for operating the cargo fall winch, and the whole system can be worked by one man. The winches are of a special type, powered by alternating current, manufactured by A/S Pusnes Mek. Verksted. The hatch covers are steel covers of the MacGregor single-pull type.

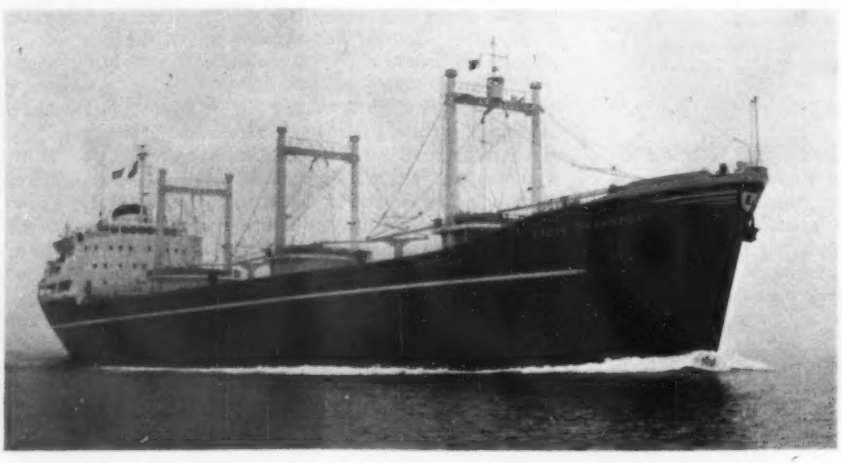


One of the Velle derricks in use during a demonstration

The wheelhouse is small for a ship of this size, and it has abaft it a separate chartroom. Navigational equipment includes radar, direction finder, gyro compass, echo sounder and electric log. The radar scanner is carried on a light alloy signal mast mounted above the wheelhouse. Two glass fibre lifeboats are carried, one of them being a motorboat.

All the accommodation for owner, captain, officers and crew is contained in the after superstructure, occupying a total of four decks. Suites for the captain and owner are arranged on the boat deck, immediately below the wheelhouse. Beneath this, the saloon deck contains the officers' dining saloon and smokeroom, as well as the chief engineer's suite and a few officers' cabins. The remaining officers' cabins are on the poop deck, together with messrooms for petty officers and crew and also the galley. The crew's cabins —all either single or double-berth—are on the upper deck.

Bulkheads in the accom-



The "Stove Transport" on trials

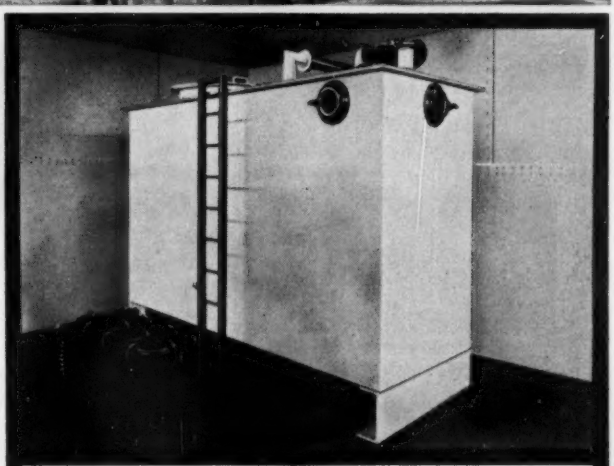
AN OPEN LETTER TO SHIPOWNERS EVERYWHERE!

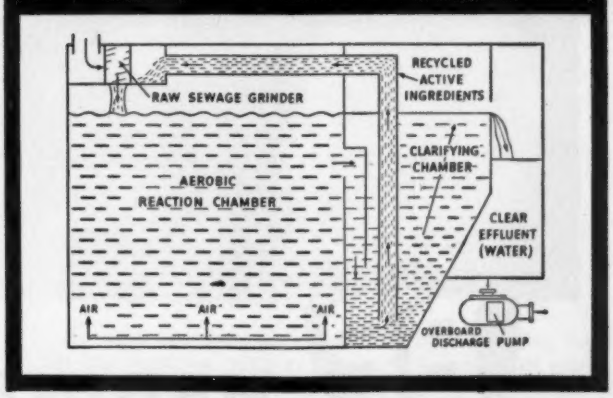
Dear Sirs,

The danger notice seen above could, quite reasonably, be erected in almost every port, river or waterway in which your ships operate. It prompts us to ask this pertinent question: what are YOU doing personally, to prevent this pollution of vital water? Merely to agree that something *ought* to be done is not enough. Direct action, and *prompt* action, should be taken in your own interests as well as the interests of fellow creatures.

With pride and complete confidence may we suggest your immediate consideration of fitting G. D. Peters "BIOGEST" complete Marine Sewage Purification and Disposal Equipment. This is the only practical answer to the Pollution problem.

Yours very faithfully,
G. D. PETERS & CO. LTD.





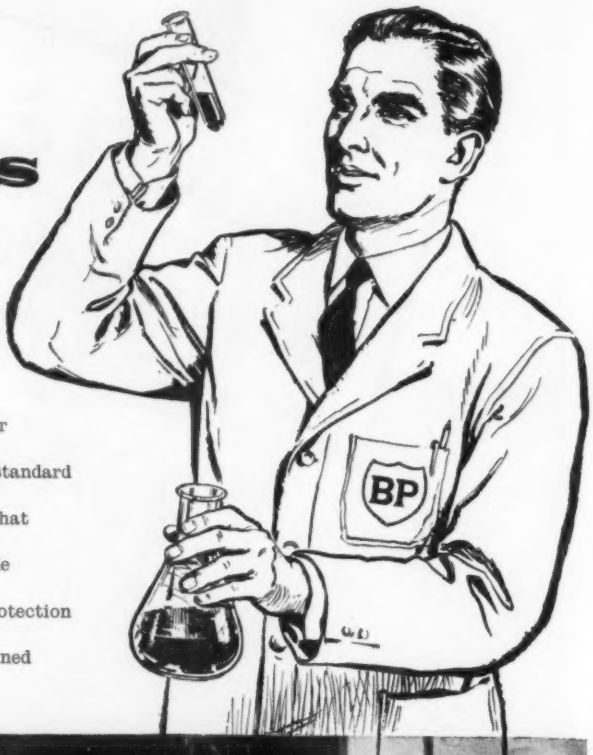
"BIOGEST" Marine Sewage Purification and Disposal Equipment is completely automatic, and requires no supervision. There is no residual sludge to be stored. **95-98% PURIFICATION IS ACHIEVED IN ONE PASS.** *It is considerably cheaper to instal "BIOGEST" during construction. "BIOGEST" is a wholly biological process, absolutely no chemicals are employed.*

G. D. PETERS & COMPANY LIMITED

(A member of the G. D. Peters Group)

Windsor Works, Slough, Bucks · Slough 23201

eye witness



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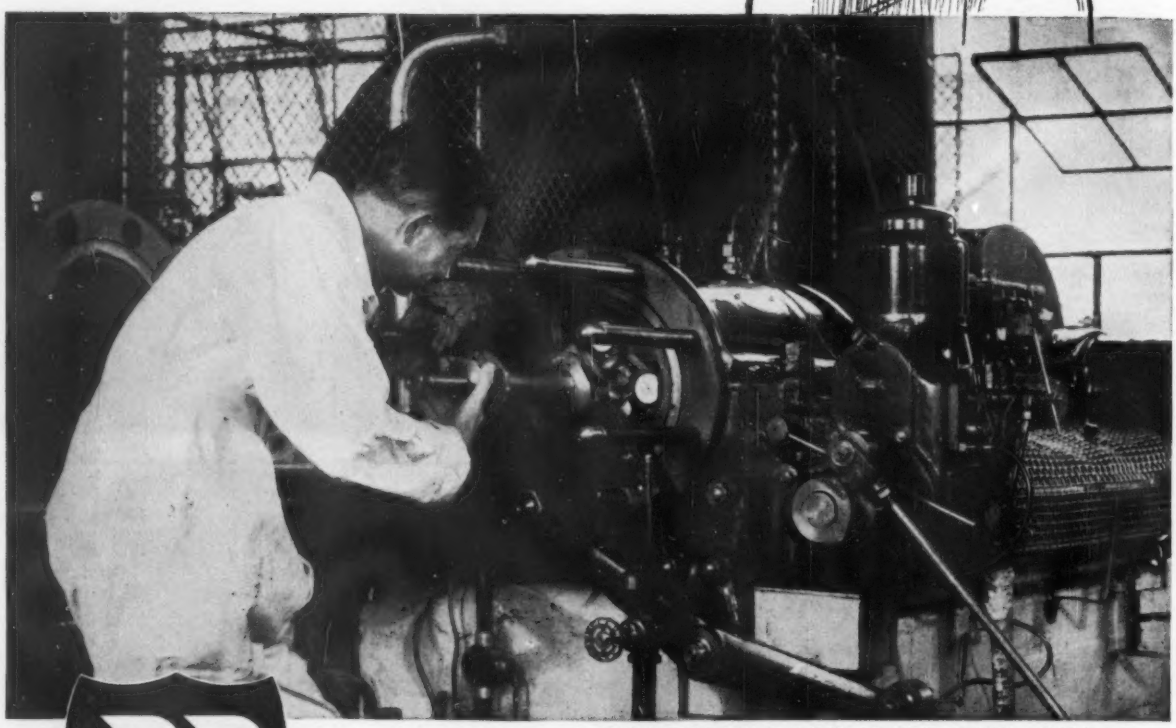

A BP Technician checking cylinder bore after a test run on BP Energol Lubricants.

BP

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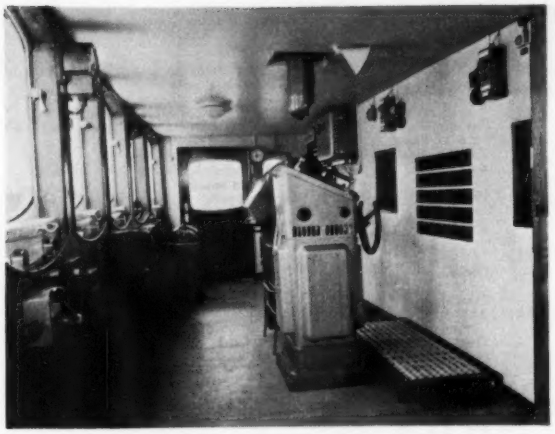


The wheelhouse of the "Stove Transport"

modation generally are plastic-covered, and where there is panelling this, as well as doors and furniture, is of polished mahogany and walnut. Crew cabins have painted bulkheads with doors and furniture of varnished beech.

The *Stove Transport* is a motorship, and the main engine consists of a six-cylinder Burmeister & Wain diesel engine, type 62-VTBF-140. Its output is 5,600 ihp, which corresponds to about 5,000 bhp, at the service speed of 125 rpm. All arrangements are made for the engine to run on heavy oil. The three auxiliary generators consist of five-cylinder trunk-piston engines of B & W type 25-MTH-40, each coupled to a 250-kW alternator. The output is at 440 volts, 3-phase, 60 cycles, and the running speed is 514 rpm. Two boilers are installed. One is an oil-fired boiler with an output of 1,000 kg/hr (2,200 lb/hr), and the other an exhaust gas boiler with an output of 1,200 kg/hr (2,650 lb/hr). The working pressure is 100 lb/sq in.

DUAL PURPOSE FOAM MONITOR

A FOAM generating unit which can also be used for delivering water has recently been perfected by the Pyrene Co Ltd. (Foam Division), Great West Road, Brentford, Middlesex. This dual purpose unit, known as the Pyrene Super-Jet foam monitor, has been designed mainly for use in oil refineries, tank farms, tanker jetties and chemical works. Mounted on a specially designed trailer it can be towed, without difficulty, by any light commercial vehicle. Where the vehicle is unable to travel, the trailer can easily be manhandled and sited by the firefighters themselves. Once in position, four drop-legs are used to stabilise the trailer while in operation.

This major foam generating unit projects a powerful jet 180-200ft long or 75ft high in still air, and it is therefore capable of projecting foam over the tops of oil storage tanks up to 60ft in height. The monitor can be elevated to an angle of 45 degrees and traversed a full 360 degrees by means of two worm and wheel mechanisms each controlled by large hand wheels.

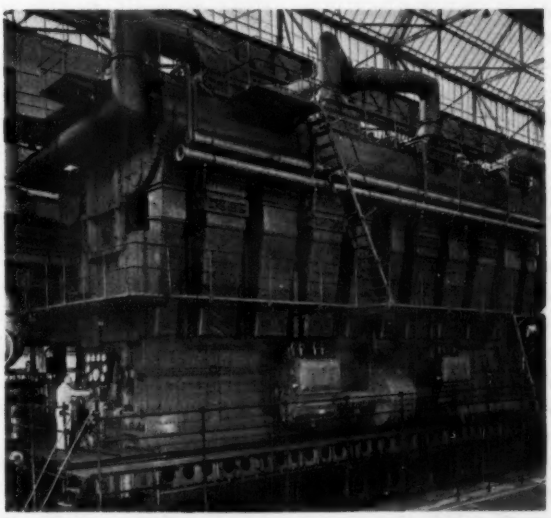
A single unit is able to deliver mechanical foam at the high rate of 5,000 imperial gpm, alternatively, water, for cooling down purposes, may be discharged at 500 gpm through a separate nozzle. For full foam production 660 gpm of water at a pressure of 170 lb/sq in is required. Four 2½in instantaneous, male gear-mounted, water inlets are provided for this purpose. A Pyrene by-pass inductor, fitted with 2½in instantaneous couplings for inducing foam compound, is connected by a separate 2½in fire hose to the same pressure supply as the main water inlets and to the foam branchpipe jet head.

POWERFUL FIAT DIESEL ENGINE

Nine-Cylinder Engine Develops 26,100 bhp on Test

THE FIRST nine-cylinder Fiat type 900S diesel engine has developed 26,100 bhp on the test bed at the Fiat Stabilimento Grandi Motori works at Turin. This engine, which has a bore of 900mm and 1,600mm stroke, is rated at a normal output of 2,100 bhp per cylinder, which means that with units having from 6 up to 12 cylinders the power range from 12,000 up to 26,000 bhp is covered, sufficient for the propulsion of very large merchant ships. The engine is for installation in an oil tanker of 38,000 dwt under construction at the Navalmeccanica shipyard at Castellammare di Stabia, Naples, for S.p.A. Di Navigazione Elios.

Details of this large-bore engine were given in THE SHIPPING WORLD of 4 November 1959. The output of 26,100 bhp (2,900 bhp per cylinder) is believed to be the maximum yet obtained with a diesel engine. It is of interest to note that over 3,000 bhp per cylinder has been



The Fiat 900S engine on the test bed

obtained on the Fiat experimental two-cylinder diesel engine, the b.m.e.p. at this output being 11 kg/sq cm (156.46 lb/sq in).

The main results obtained during the shop trials on the nine-cylinder 900mm bore engine, at normal rating and with overload, are as follows:

	Normal rating	*Overload*
Output, bhp	19,043	26,100
Speed, rpm	122.7	131.4
M.e.p., kg/sq cm ...	7.62	9.76
Spec. fuel cons., gr/hp-hr	154	165.5
Mean temp. at cyl. exhaust, deg C	298	343

Burning heavy fuel, the specific consumption during the test bed trials was 164.5 gr/bhp-hr. It is stated that even when the engine was developing 26,100 bhp, the mechanical and thermal performance was perfectly normal, and there was no exhaust visible. There are now 11 engines of this new type, having eight, nine and twelve cylinders, on order and under construction at the workshops of Fiat and their licensees.

NEW CONTRACTS

Shipowners	No. of Ships	Type	Tons d.w. (gross)	Dimensions (ft.) L.b.p.(o.a.) × B × D.(dft.)	Delivery	Speed (knots)	Propelling Machinery	Total h.p.	Engine Builders	Shipbuilders
Yards in Great Britain and Northern Ireland										
British Road Services	1	Lighter	—	(100.5) × 23 × 8.5	—	—	Tw.-scr. diesel	240	Kelvin	Richard Dunston
Shaw Savill & Albion	2	Refrig. cargo	12,400 (13,100)	(537) × 71 × (32.25)	1962/3	18	Tw.-scr. 7-cyl B & W diesels	—	Harland & Wolff	Swan Hunter, Neptune
British owners	1	Ketch	208	—	—	—	Tw.-scr. diesel	—	—	Yarrow & Co
Bristol City Line of Steamships	1	Cargo	8,250	410 × 57 × 35	—	—	6-cyl Sulzer	6,600	Hawthorn Leslie	Burntisland S.B. Co
Ben Line Steamers	1	Cargo pass.	(11,400)	549.5 × 71.25 × 30	1963	19	10-cyl Sulzer	13,500	Barclay Curle	Chas. Connell & Co
Sir R. Ropner & Co (Management)	1	Bulk carrier	24,000	—	1962	—	Diesel	7,500	Wm. Doxford & Sons	Sir Jas. Laing & Sons
(Overseas Yards)										
China Merchants S.N. Co, Formosa	2 (1006/7)	Cargo	12,500	488.9 × 66.95 × 41.9	—	—	Diesel	12,000	—	Ingalls-Taiwan S.B. Co
A/S J. Ludwig Mowinckels	1	Cargo	7,500	—	1963	—	Diesel	—	—	Elsinore S.B. Co
Einar Rasmussen, Kristiansand	1	Bulk carrier	18,000	495.42(528) × 71.5 × 43.42(31)	1962	16	8-cyl M.A.N. diesel	8,480	Shipbuilders	Verolme United Shipyards
Anders Jahre Sandefjord	†4	Tankers	51,000	—	—	—	Geared turbine	—	Shipbuilders	Kieler Howaldtswerke
Anders Jahre, Sandefjord	†1	Bulk carrier	15,000	—	—	—	Geared turbine	—	Shipbuilders	Kieler Howaldtswerke

† Replaces order for two tankers of 48,000 dwt, one of 40,000 dwt and two bulk carriers of 15,000 dwt

LAUNCHES

Date	Shipowners	Ship's Name and/or Yard No.	Type	Tons d.w. (gross)	Dimensions (ft.) L.b.p.(o.a.) × B. × D.(dft.)	Speed (knots)	Propelling Machinery	Total h.p.	Engine Builders	Shipbuilders
Yards in Great Britain and Northern Ireland										
Apr. 27	Govt of the Solomon Islands	*Coral Princess* (188)	Pass. cargo	(136)	88	—	Two diesels	304	Gardner	Herd & Mackenzie, Buckie
Apr. 28	Andrew Weir & Co	*Levernbank* (1638)	Cargo	10,270 (8,700)	450(483) × 62.5 × 38.5(20.5)	15	6-cyl B & W diesel	5,800	Shipbuilders	Harland & Wolff, Belfast
Apr. 28	Commissioners of Northern Lighthouses	*Pole Star* (531)	Lighthouse tender	(1,400)	215 × 40 × 18.5(12.75)	14.25	Tw.-scr. diesel	1,920	British Polar	Caledon S.B. Co
May 1	Donvale Trawling (Aberdeen)	*Donvale*	Trawler	(48)	(74) × 19.5 × 10.5	—	Diesel	264	Lister Blackstone	John Lewis & Sons
May 1	Strick Line	*Gorjistan*	Cargo	12,800	500.5(466) × 63 × (30.1)	16	6-cyl diesel	9,200	Wm. Doxford & Sons	John Readhead & Sons
May 1	Corpn. of Trinity House	*Stella*	Lighthouse tender	(1,425)	205.42(221) × 37.5 × 23.5	—	Tw.-scr. diesel-electric	1,450	English Electric	J. Samuel White
May 2	Australind S.S. Co	*Australind*	Cargo	10,600	431(466.25) × 61.75 × 40.2(26.95)	14.5	5-cyl G.V. diesel	6,300	N.E. Marine	Bartram & Sons
May 2	Coast Lines	*Buffalo*	Cargo	2,200	(258) × 41 × (16)	14	Diesel	2,800	British Polar	Ardrossan Dockyard
Overseas Yards										
Mar. 29	Yamashita Steamship Co & Futaba Shipping	*Yamatomi Maru* (3845)	Tanker	33,800 (21,200)	646 × 86 × 45(34)	16.75	B & W diesel	15,000	Shipbuilders	Hitachi S.B. & E. Co, Innoshima
Apr. —	Cie. Marocaine de Nav.	*Chaouen* (1302)	Cargo	3,300 (2,500)	269 × 44.33 × 27	14.5	Diesel	2,740	M.A.N.	Schlichting Werft
Apr. 6	Cie. Nantaise des Chargeurs de l'Ouest	*Pentellina* (144)	Ore carrier	17,500	508.25(544.33) × 68.95 × 43.75(30.1)	14.3	6-cyl B & W diesel	7,500	Schneider	At. et Ch. de la Seine Maritime
Apr. 12	Surrey Shipping Co	*Tilapa* (889)	Refrig. cargo	6,250 (6,700)	415 × 59.33 × 36(26)	17.5	Geared turbine	8,500	De Laval	Bremer Vulkan
Apr. 14	Pan-Islamic S.S. Co, Karachi	*Safina-E-Arab* (97)	Pilgrim cargo	(7,000)	420(460) × 60 × 36	15	Sulzer diesel	6,500	Shipbuilders	Soc. Espanola de Const. Nav.
Apr. 15	Nav. Vizcaina S.A.	*Bilbao* (110)	Tanker	32,000 (21,700)	630 × 87.1 × (34.25)	16.25	Geared turbine	14,000	Parsons	Empresa Nacional Bazan, El Ferrol
Apr. 18	U.S.S.R.	—— (109)	Tanker	4,200 (3,000)	—	—	Diesel	—	—	A/B Gavle Varv
Apr. 18	Rederi A/B Ragne	*Maj Ragne* (224)	Cargo	6,000 (3,000)	344.5 × 50.5 × (23.5)	14.5	Diesel	5,900	Burmeister & Wain	Ekensbergs Varv
Apr. 21	U.S.S.R.	*Aksai* (116)	Tanker	4,000 (3,330)	—	—	Diesel	—	Burmeister & Wain	Rauma-Repola o/y
Apr. 22	U.S.S.R.	—	Cargo	11,000	465.95 × 68.58 × 42(26)	16	Diesel	7,200	Halberstadt	VEB Warnowwerft
Apr. 22	VEB Deutche Seereederei	*Luebbenau*	Cargo	11,000	465.95 × 68.58 × 42(26)	16	Diesel	7,200	Halberstadt	VEB Warnowwerft

TRIAL TRIPS

Date	Shipowners	Ship's Name and/or Yard No.	Type	Tons d.w. (gross)	Dimensions (ft.) L.b.p.(o.a.) × B. × D.(dft.)	Speed (knots)	Propelling Machinery	Total h.p.	Engine Builders	Shipbuilders
Yards in Great Britain and Northern Ireland										
Mar. —	Colne Fishing Co	*Anglerfish*	Trawler	(160)	93(102.9) × 21.25 × 10.75	10	6-cyl diesel	338	Ruston & Hornsby	Richard Dunston
Mar. —	Cory Bros.	*Llandaff City* (1055)	Tug	—	50(53.75) × 13 × 6.5	9½ (T)	8-cyl diesel	240	Kelvin	Richard Dunston
Mar. 7	British Transport Commission	*Paul Holme* (2)	Hopper barge	(800)	(191.5) × 39.75 × (12.75)	—	7-cyl diesel	—	Ruston & Hornsby	Drypool Eng. & Dry Dock Co
Apr. —	Cable & Wireless	*Retriever* (1302)	Cable ship	(4,000)	330 × 47.5 × 29.5	15	Diesel-electric	3,300	English Electric	Cammell Laird
Apr. —	South American Saint Line	*St. Rosario* (705)	Cargo	11,460 (9,150)	440 × 62.33 × 40.2 (27.75)	15	4-cyl diesel	5,000	Wm. Doxford & Sons	Jos. L. Thompson & Sons
Apr. 26	Palm Line	*Ikeja Palm* (1982)	Cargo	8,800 (6,000)	430 × 62.5 × 36.95(25)	15 (T)	4-cyl Doxford diesel	4,500	Shipbuilders	Swan Hunter, Neptune
Apr. 28	Norsk Braendselolje (Sig. Bergesen)	*Norsk Drott* (1603)	Tanker	28,300 (21,000)	601(643.58) × 80.5 × 45.5(34.5)	15.75	7-cyl B & W diesel	10,500	Shipbuilders	Harland & Wolff Govan
Overseas Yards										
Mar. —	Esso Tankschiff-Reed	*Esso Koln* (1101)	Tanker	48,000 (31,700)	705(740) × 102 × 50 (37.75)	17.25	Geared turbine	17,540	Shipbuilders	Kieler Howaldtswerke
Mar. —	Hamburg-Sudamerikanische (Rudolf E. Oetker)	**Cap Colorado* (319)	Cargo	7,000 (4,800)	361.2(390.9) × 52.5 × 31.5(25)	16	9-cyl diesel	5,850	M.A.N.	Ang. Pahl
Mar. —	Sitki Kocman & Selahaddin, Istanbul	*Bodrum* (852)	Cargo	6,215 (4,450)	344.42(377.33) × 51.9 × 29.5	14.5	Two 9-cyl diesels	3,780	M.A.N.	A. G. Weser, Bremerhaven
Mar. 24	Mississippi Shipping Co	*Del Rio* (943)	Cargo	10,930 (9,000)	482(516) × 70 × 45(28)	18	Geared turbine	11,660	Westinghouse	Avondale Shipyards
Apr. 26	Rederi A/B Sigyn	*Sollen* (252)	Cargo	10,270 (8,550)	(467.2) × 60.75 × 40.5 (29.67)	15	6-cyl G.V. diesel	5,600	Shipbuilders	Uddevallavarvet
Apr. 27	Sig. Bergesen & Co	*Bergebonde* (176)	Tanker	51,300 (31,000)	710(734) × 104 × 51.5 (38.5)	17.5	10-cyl diesel	21,000	Burmeister & Wain	Rosenberg M.V.

* Launched as *Norderdick* for Rudolf Pahl

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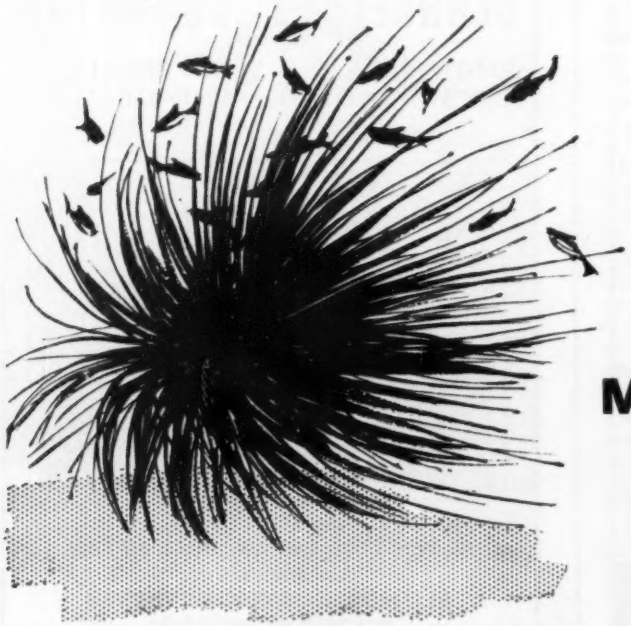

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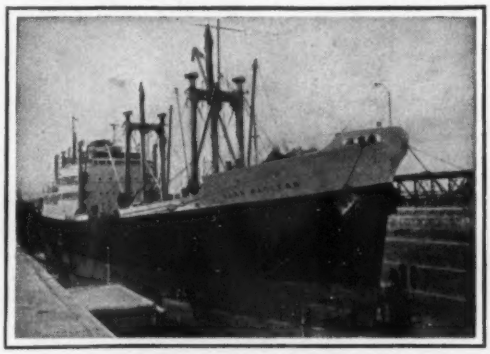

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MARITIME NEWS IN BRIEF

MR N. J. ROBINSON, a director of Stag Line Ltd, North Shields, has been elected chairman of the North of England Shipowners' Association for the ensuing year in succession to Mr W. T. Garbutt. Mr H. G. Witherington has been appointed to succeed Mr Robinson as vice-chairman.

MR D. K. ROBERTS, of Tynemouth, engineer superintendent of the Leighton Shipping Co Ltd, has died.

MR A. BETTS BROWN has resigned as a director of Brown Brothers & Co Ltd. He is succeeded by Mr J. Henderson, at present senior consultant with Production Engineering Ltd.

MR L. L. WHITENECK has been appointed chief harbour engineer of the Port of Los Angeles, succeeding the late Admiral Edward V. Dockweiler.

MR J. H. HARVEY is relinquishing his executive duties with Walford Lines Ltd. He will remain a director.

VICE-ADMIRAL J. HUGHES-HALLETT, Joint Parliamentary Secretary to the Ministry of Transport, has appointed Mr A. W. Primmer to be his Private Secretary.

MR F. MURPHY has joined Metal & Pipeline Endurance Ltd as a senior cathodic protection engineer.

THE N.V. HOUTVAART, managed by Vinke & Company, Rotterdam, will shortly open a new shipping service between ports on the east coasts of North and Central America, which will be known as the Vulcano Line. The motorships *Maas, Schie, Waal* and *Yssel*, all of about 1,900 grt and built from 1947 to 1949, will be employed.

THE WEST INDIES FEDERAL GOVERNMENT has passed a Bill to establish the West Indies Shipping Corporation for the ownership of the ships which Canada is to give to the West Indies. The tender submitted by Furness, Withy & Co Ltd for the management and operation of the permanent federal shipping service has been accepted by the Federal Government, and this service will be inaugurated during the latter half of this year.

MR E. J. HUNTER, chairman of Swan, Hunter & Wigham Richardson Ltd, has been appointed chairman of the Dry Dock Owners & Repairers Central Council in succession to Mr George Morrison, managing director of the Greenock Dockyard Co Ltd. Mr Richard Hill, a director of Charles Hill & Sons Ltd, Bristol, is the new senior vice-chairman, and Mr A. Duncan, a director and repair manager of Cammell Laird & Co (Shipbuilders & Engineers) Ltd, Birkenhead, the junior vice-chairman

THE FIRST cargo of cement to be discharged at a new bulk depot at Sunderland South Docks is due to arrive shortly. The depot, two former granaries, is designed to handle 75,000 tons a year. The first shipment will be brought by the *Walcrete* (1,700 dwt), which has been adapted by the Blyth Drydock & Shipbuilding Co Ltd, for carrying cement in bulk.

* * * *

THE United Kingdom Government has notified the Intergovernmental Maritime Consultative Organization (IMCO) that it has decided to accept, subject to certain safeguards, arrangements regarding the carriage of grain which comply with Regulations 2-14 of Chapter VI of the International Convention for the Safety of Life at Sea, 1960. It will thus be possible for British shipowners to adopt these arrangements in place of those prescribed in the Regulations on the carriage of grain embodied in the 1948 Convention. The notification will enable U.K. shipowners to load ships in accordance with the Grain Regulations embodied in the revised International Convention for the Safety of Life at Sea, 1960, before that Convention itself comes into force.

A MARINE RADAR SIMULATOR installation recently supplied to the Nautical Department of the Liverpool College of Technology by Ultra Electronics Ltd has been officially opened. This installation is the first in Britain to be equipped for simulation of two own ships, and has been developed specially by Ultra to suit the needs of the College.

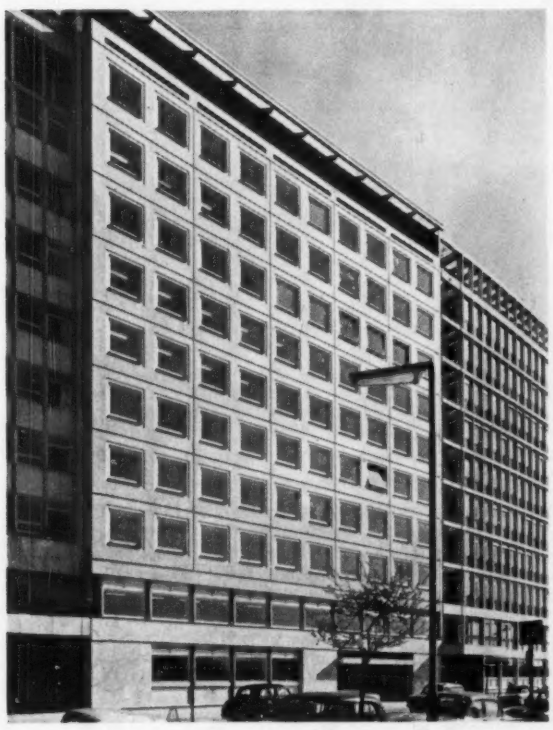
FIVE HUNDRED AND FOURTEEN SHIPS, flying various flags, entered the Port of Hong Kong during March; 215 of the ships entering port were of British registry, while 222 ships flying the British flag were among the 527 vessels cleared in the same period. A total of 470,671 tons of commercial cargo was discharged and 156,562 tons loaded.

THE BRITISH AIRCRAFT CORPORATION has formed a new company, British Aircraft Corporation (U.S.A.) Inc., with its headquarters in Arlington, Virginia. The business of the new company will be the promotion of sales of aircraft and guided weapons in the U.S.A. Its principal office will be at 399 Jefferson Davies Highway, Arlington, Virginia, U.S.A.

THE FORMAL INVESTIGATION into the casualty to the tanker *Esso Portsmouth* at Milford Haven on 9 July 1960 has been fixed for hearing at the Council Chamber, Holborn Town Hall, London WC1, on October 10.

TEMA HARBOUR, in Ghana, which has been used on a restricted basis for some months now, will be officially opened to international shipping in July.

DECCA RADAR LTD has obtained a repeat order from the Royal Swedish Navy for highly specialised radar equipment to the value of about £300,000.



NEW BSRA BUILDING

The British Shipbuilding Research Association has moved to new offices at Prince Consort House, 27/29 Albert Embankment, London, SE1. Prince Consort House comprises 41,909 sq ft of accommodation and includes an under cover car park. The building has ten main floors with a mezzanine and basement. The Association is initially occupying the six upper floors, the mezzanine and the basement

MR J. W. ATWELL has been appointed a director of G. & J. Weir Holdings Ltd. He joined the production staff of Stewarts & Lloyds Ltd and held several management appointments before joining G. & J. Weir Ltd in 1954 as works manager at Cathcart. He was appointed works director in 1955 and deputy managing director in 1959. He became managing director of G. & J. Weir Ltd in January of this year. He is a member of the Council of the Institution of Mechanical Engineers and of the Institution of Engineers & Shipbuilders in Scotland

ELLERMAN & BUCKNALL STEAMSHIP CO LTD are now offering a monthly scheduled service from Middlesbrough to the Far East with transits to Malaya (Penang, Port Swettenham) and Singapore, 25 days; Hong Kong, 36 days; Formosa, 39 days; Japan, 43 days.

THE LONDON SHIPPING ATHLETIC ASSOCIATION are to hold their annual athletic championships and inter-shipping contest at the University of London Athletic Ground, Motspur Park, New Malden, Surrey, on June 12 (6 p.m.) and June 15 (6.15 p.m.).

WM. THOMSON & COMPANY, managers of Ben Line Steamers Ltd, have made the following staff promotions: Hon N. D. G. Galbraith to be an assistant manager; Mr T. R. Park, chief accountant; Mr A. J. Rait, an assistant manager; Mr J. E. Taylor, an assistant manager; and Mr D. A. Thorburn, an assistant manager. Captain R. D. Robb has been promoted to assistant marine superintendent, and Captain J. W. Shields to assistant London superintendent.

* * * *

OVERSEAS visitors to Britain in February totalled 59,000 an increase of 12 per cent on the same month last year. There were 28,000 European visitors during the month —13 per cent more than in February 1960. Visitors from the United States increased by 2 per cent to 10,150. The February figures brought the total number of overseas visitors to Britain in the first two months of 1961 to 120,930—an increase of 13 per cent over the same period last year.

SIR THOMAS GILMOUR JENKINS and Brigadier E. J. Shearer have been elected directors of London & Overseas Freighters Ltd.

THE installation of air conditioning systems aboard the trans-Atlantic passenger liners *Israel* and *Zion*, of the Zim Israel Navigation Co Ltd, will be completed this month.

THE British insurance market has been called on to underwrite a substantial proportion of the record insurance placed on the French Line's new liner *France*. Insurance cover on the hull of this 66,000-grt liner will total about £24 million, the largest ever placed on a single vessel. The substantial British share will be borne by both the insurance companies and Lloyd's underwriters. During the past year the market had helped to provide cover of £16 mn for the *Canberra* and £15 mn for the *Oriana*.

M.O. Leaflet No 3 (Meteorological Office Services), which gives details of weather bulletins and gale warnings for coastwise shipping and fishing vessels, has recently been reprinted. Copies may be obtained free from Port Meteorological Officers, Merchant Navy Agents of the Meteorological Office (M.O.1.), London Road, Bracknell, Berks.

THE entire range of Parkinson-Schwank gas radiant heaters for commercial and industrial heating is described and illustrated in a new leaflet now available from Parkinson Cowan Industrial Products, Dolphin Works, Fitzalan Street, London SE11. As well as providing the most important technical details of wall-mounting, pipe suspension, angle and horizontally mounted heaters, the leaflet also contains a valuable section on heater controls and ignition.

THE EAST GERMAN FLEET last year added some 65,500 dwt of shipping, and on March 1 last the VEB Deutsche Seereederei had a fleet of 52 vessels (22 seagoing cargo vessels, six tankers, 22 motor coasters, of a total of 246,721 tons, and a passenger vessel and a ferry of together 18,551 grt). The seven-year plan aims at a fleet of about 90 vessels, of about 500,000 dwt in 1965.

DEWRANCE & CO LTD have formed a Metals Division. This will consist of the foundry at Hillington and the Special Alloys Division in London. The new division will have its own board of management and will be responsible for the production and sales of high quality non-ferrous castings, nickel alloy castings, stainless steel castings, "Endewrance" hardfacing and high temperature brazing alloys.

FURNESS WITHY & CO LTD will be extending their Great Lakes services during the 1961 season by loading at Newcastle upon Tyne for United States Great Lakes ports, in addition to London, where they load for both Canadian and U.S. ports in the Great Lakes.

THE fisheries research trawler *Clione*, built by Cochrane & Sons Ltd, was described in THE SHIPPING WORLD of April 26. The main machinery contractors for the vessel were The Drypool Engineering & Dry Dock Co Ltd, Hull, and this firm was responsible for the purchase and installation of the Ruston & Hornsby main diesel engine and other machinery in the vessel.

I.C.I. marine paints have been used exclusively on two new vessels, the *Cape Nelson*, built at Lithgows Ltd for the Lyle Shipping Co, and the *Clymene*, a tanker building at Hawthorn Leslie, Hebburn-on-Tyne, for the Hadley Shipping Co (Houlder Bros.). I.C.I. marine paints were also used on the outside hull and deck of the *Booker Venture*.

"RULES and Regulations Governing the Port Facilities" at Freeport, Grand Bahamas, are now available from the London office of the Grand Bahama Port Authority at 7 Cleveland Row, St James's, SW1. They include details of charges against ships, such as towage, pilotage and linesmen, and for handling and storage of cargoes.

FIFTY YEARS AGO

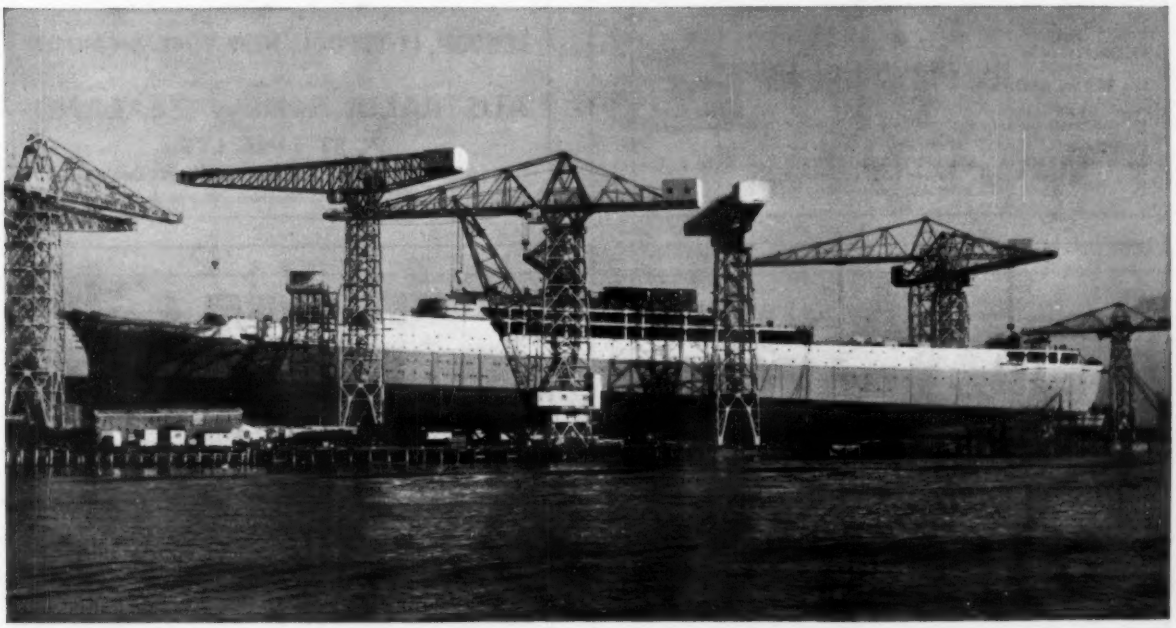
From THE SHIPPING WORLD of 10 May 1911

The next important launch on the Clyde will be the large Anchor liner *Cameronia*, which will be floated at Meadowside towards the end of the present month. Once she is launched, her fitting-out for sea will be pushed forward with all despatch, so that she may be ready to take her place on the Glasgow and New York service late in August or early in September, in time for the Westward passenger traffic. With the completion of this vessel the Anchor Line will have four large fast steamers on their North Atlantic service, the others being the *Columbia*, *Caledonia* and *California*. The *Furnessia*, which is at present on the route, will then probably be held as a reserve steamer.

Canadian prosperity and Canadian enterprise know no bounds! The President of the Grand Trunk, Mr. Charles M. Hayes, has explained that the time was fast advancing when the Grand Trunk Railway Company would have to consider the question of a service of steamers across the Pacific from the railway company's western terminus, although the transcontinental line might not be completed before 1914. "We are going to have ships of our own on the Pacific," said Mr. Hays, "and they will be 'the last word' in steamship construction".

The Union-Castle liner building at Fairfield is to be named *Gloucester Castle*, and will be launched next month. The steamer which the Fairfield Company are building for the Union Steamship Company of New Zealand is to be named *Maunganui*.

SISTER SHIPS AGREE ABOUT DECORPLAST SURFACES



This is the modern, sleek 'Transvaal Castle' prior to her launching. Modern too are the new Decorplast surfaces of laminated plastic—used extensively in the Passenger accommodation of this fine liner.

Her sister ship too, the Union Castle Line's 'Windsor Castle', which sailed on her maiden voyage last year, was fitted out with Decorplast surfaces. Both Sister Ships "agree" about the unbeatable, hard-wearing qualities of British-made Decorplast . . . the bright, attractive patterns and colours which have been especially developed for the Shipping industry.

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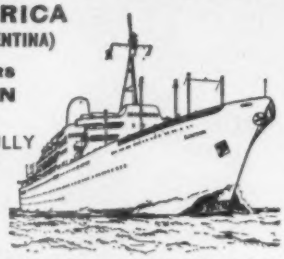

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PORT DISBURSEMENT ACCOUNTS

DETAILS OF EXPENDITURE IN VARIOUS PORTS

SZCZECIN, Poland

Size of vessel: 1,616 nrt
From: Aalborg in ballast *Sailed for:* Rordal
Loaded: 4,004 metric tons of coal
Date: March 1961
Time in port: 1 day

	Zloties	U.S.$
Pilotage	3,868.70	161.60
Towage	3,753.79	156.80
Mooring	329.18	13.75
Tonnage dues	9,284.89	387.84
Trimming	14,379.08	600.63
Sailors' Home	193.44	8.09
Postage, telegrams, Customs forms, petties	222.60	9.30
Agency fee inwards (50% of tariff)	2,256.00	94.24
outwards (67% of tariff)	3,023.04	126.28
	Zl 37,310.72	$1,558.53

Size of vessel: 1,349 nrt
From: Melilla *Sailed for:* Helsinki
Discharged: 3,100 metric tons of iron ore
Loaded: 3,150 metric tons of coal
Date: March 1961
Time in port: 7 days

	Zloties	U.S.$
Pilotage	3,875.41	161.88
Towage	4,725.76	197.40
Mooring	553.01	23.10
Tonnage dues	10,334.42	431.68
Shifting expenses	4,653.46	194.38
Trimming	11,313,09	472.56
Sailors' Home	161.60	6.75
Telegrams, postage, petties, etc.	481.44	20.11
Agency fee, inwards and outwards (both at 67% of tariff)	5,467.20	228.38
	Zl 41,565.39	$1,736.24

Size of vessel: 140 nrt
From: Aalesund *Sailed for:* Malmo
Discharged: 153,279 kilos of general cargo
Loaded: 400,445 kilos of general cargo
Date: March 1961
Time in port: 1 day

	Zloties	U.S.$
Pilotage	167.58	7.00
Mooring	197.51	8.25
Tonnage dues	670.32	28.00
Discharging costs	954.49	39.87
Opening holds	41.90	1.75
Stowage	1,875.70	78.35
Quantity control	2,363.36	98.72
Dunnage paper	1,484.28	62.00
Sailors' Home	16.76	0.70
Telegrams, telex, postage, etc	512.97	21.43
Agency fees, inwards and outwards	3,060.00	127.82
	Zl 11,344.87	$473.89

From: Morska Agengja w Szczecinie, Waly Chrobrego 2, P.O. Box 325, Szczecin, Poland. *Cables:* Polbroker. *Telex:* 24-226.

NANTES, France

Size of vessel: 1,426 nrt, 2,726 grt
From: Huelva *Sailed:* in ballast
Discharged: 3,522 tons of pyrites

	N francs
Pilotage (inwards Nfr 692.95; outwards Nfr 726.51	1,419.46
Towage	803.77
Quay dues	1,315.62
Tonnage dues	1,112.28
Sweeping tax	50.00
Boatmen	54.85
Lifeboat contribution	3.00
Brokerage inwards (incl. Nfr 18.39 Govt. tax)	668.00
Agency fees	687.51
	Nfr 6,114.49

Size of vessel: 310 nrt, 499 grt
From: Bristol *Sailed:* in ballast
Discharged: 803 tons of spent oxide

	N francs
Pilotage, in and out	530.30
Boatmen	39.50
Quay dues	531.05
Tonnage dues	242.58
Sweeping tax	20.00
Brokerage inwards (incl. Nfr 4.55 Govt. tax)	165.15
Agency fees	285.58
	Nfr 1,814.16

Size of vessel: 255 nrt, 499 grt
From: Rotterdam *Sailed:* in ballast
Discharged: 420 tons of oilcakes in bulk and bags

	N francs
Pilotage, in and out	487.04
Boatmen	72.77
Quay dues	297.73
Tonnage dues	198.90
Sweeping tax	20.00
Opening hatches and cargo survey	25.35
Lifeboat contribution	1.00
Brokerage inwards (incl. Nfr 2.38 Govt. tax)	86.38
Agency fees	181.10
	Nfr 1,370.27

From: Pierre Pinault, 41 Quai de la Fosse, P.O. Box 39, Nantes. *Cables:* Goupils-Nantes.

BELÉM (PARA), Brazil

Pro Forma Account for vessel of 3,700 nrt, discharging 4,000 tons of general cargo and loading 4,000 tons
Time in port: 20 days

	Cruzeiros
Pilotage, plus overtime	48,600.00
Tonnage dues, in and out	325,632.00
Light dues	2,000.00
Tugs for unmooring	2,142.30
Wharfage (20 days 150 metres)	28,800.00
Despatching	17,712.00
Customs charges	18,000.00
Discharging and loading	3,561,884.10
Tally clerks	209,556.30
	Cr 4,214,326.70

(*Continued on next page*)

PORT DISBURSEMENT ACCOUNTS

(*Continued from previous page*)

YMUIDEN, Netherlands

Size of vessel: 3,051 nrt, 5,029 grt
Discharged: 8,111 tons of iron ore
Time in port: 2 days
Date: December 1960

	Guilders
Pilotage, inwards	409.00
outwards	102.00
Pilot travelling expenses	10.00
Boatmen	73.00
Towage	1,500.00
Quay dies	711.60
Administration charge	32.96
Bail at Custom House	25.20
Tender hire	35.00
Contribution to Lifeboat Association	12.00
Dock officials fees	5.00
Agency fees (fl 120 plus 12 cents per grt)	753.48
	fl 3,669.24

Size of vessel: 7,059 nrt, 11,396 grt
Discharged: 14,519 tons of coal
Time in port: 2½ days
Date: February 1961

	Guilders
Pilotage, inwards	583.00
outwards	147.00
Towage	1,980.00
Boatmen	83.00
Quay dues	1,612.55
Administration charge	88.51
Contribution to Lifeboat Association	20.00
Bail at the Custom House	25.20
Tender hire	45.00
Dock officials fees	5.00
Agency fees (fl 150 plus 12 cents per grt)	1,517.52
	fl 6,106.78

From: N.V. Nebam Ymuiden, Postbus 512, Ymuiden, Netherlands. *Cables:* Nebam. *Telex:* 31136.

DUNDEE, U.K.

Size of vessel: 190 nrt, plus 121 tons of deck cargo=311 tons
Discharged: 167 stds DBB
Time in port: 1½ days
Date: January 1961

	£	s	d
Pilot in and out	13	7	4
Mooring	2	0	0
Dock dues	60	9	6
Tay lighting and buoying dues	7	5	10
Discharging	185	6	0
Tally	16	6	4
Agency fee	16	0	0
	£300	15	0

Size of vessel: 194 nrt
Discharged: 273 tons of general cargo
Time in port: 1 day
Date: January 1961

	£	s	d
Pilotage	12	17	0
Boatmen	2	10	6
Dock dues	37	14	6
Tay lighting and buoying dues	4	11	0
Discharging	74	0	0
Crane dues	14	13	9
Agency fee	26	0	0
	£172	6	9

From: B. L. Nairn & Co, 33 Commercial Street, Dundee. *Cables:* Nairn, Dundee.

LOBITO, Angola

Size of vessel 4,267 nrt, 6,972 grt
From: Foreign port *Sailed for:* Foreign port
Loaded: 10,300 tons of manganese ore in bulk
Date: April 1961

	Escudos
Anchorage, pilotage, etc	3,400.00
Towage	1,846.00
Tonnage dues (Customs)	8,958.00
Wharfage	1,813.00
Cranage	41,047.00
Stevedoring	61,570.00
Stevedores' and labourers' overtime	2,680.00
Port police	453.00
Immigration officer	60.00
Custom House overtime and clearance	1,528.00
Forms, stamps, etc.	1,000.00
Launch and car hire etc.	970.00
Sundries	440.00
Entering and clearing dues (Port Captain)	2,538.00
Agency fees	9,249.25
	Esc 137,552.25
At Esc 80.08 to the £	£1,717 13s 9d

Size of vessel: 2,806 nrt, 4,882 grt
From: Foreign port *Sailed for:* Foreign port
Loaded: 8,500 tons of maize in bulk
Date: April 1961

	Escudos
Anchorage, pilotage, etc	3,864.00
Towage	1,470.00
Tonnage dues	6,098.00
Wharfage	6,348.00
Cranage	60,845.00
Stevedoring	94,617.00
Stevedores' and labourers' overtime	5,080.00
Port police	863.00
Immigration officer	120.00
Custom House overtime	1,265.00
Sundry Custom charges	1,765.00
Launch and car hire, etc	1,170.00
Entering and clearing dues (Port Captain)	1,568.00
Agency fees	7,567.56
	Esc 192,640.56
At Esc 80.08 to the £	£2,405 12s 1d

Size of vessel: 3,140 nrt, 5,564 grt
From: Foreign port *Sailed for:* Foreign port
Discharged: 400 tons of general cargo
Loaded: 600 tons
Date: April 1961

	Escudos
Anchorage, pilotage, etc	413.00
Towage	3,484.00
Tonnage dues	7,570.00
Pier dues	11,341.00
Wharfage	752.00
Cranage	5,345.00
Stevedoring	12,527.00
Stevedores' and labourers' overtime	6,233.00
Port police	478.00
Immigration officer	120.00
Custom House overtime	1,328.00
Sundry Custom charges	2,115.00
Fresh water (186 cu. m.)	3,380.00
Launch and care hire, etc	993.00
Entering and clearing dues (Port Captain)	2,500.00
Agency fees	4,204.20
	Esc 62,783.20
At Esc 80.08 to the £	£784 0s 0d

From: Hull, Blyth (Angola) Ltd., Caixa Postal No. 100, Lobito, Angola, Portuguese West Africa. *Cables:* Vapor

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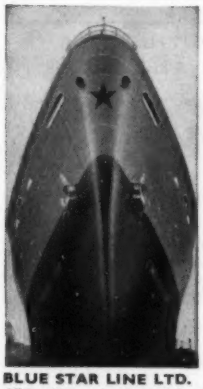

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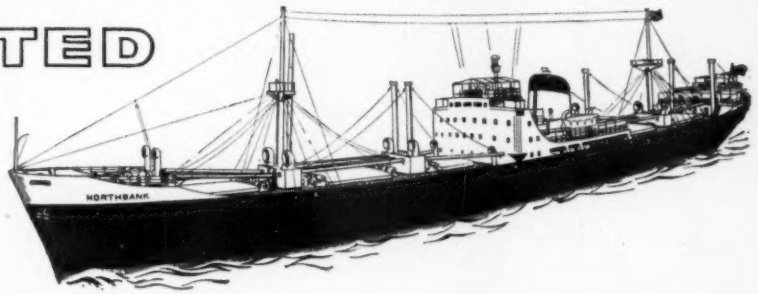

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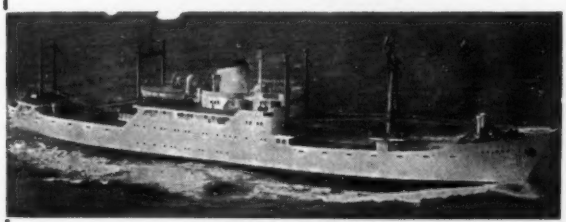

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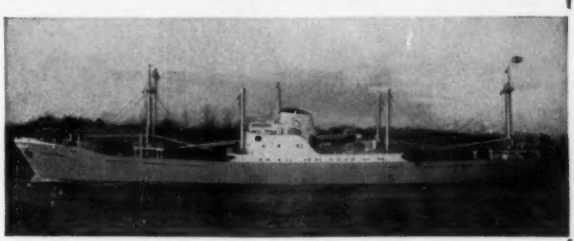

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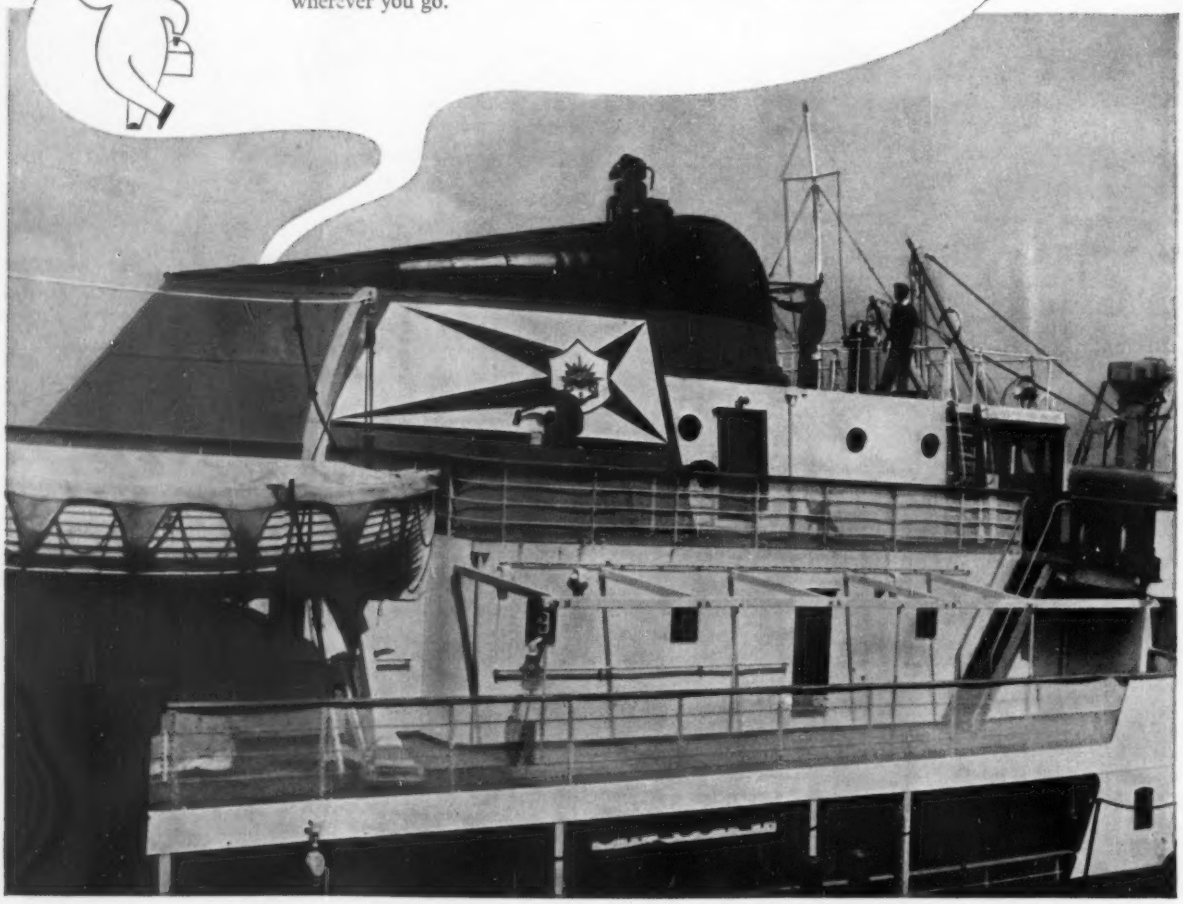

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